A Lecture
ON
THE SPREAD OF PLAGUE.

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(*Concluded from page 7.*)

WHAT has been termed the "miasmatic" method of infection bears distinctly upon the maintenance and epidemicity of plague. Miasmatic infection implies a soil-bred disease—a disease existing, as we assume malaria does, in the earth itself, in the water, or in some particular form of fermenting or decomposing material in which the germ finds a nidus. In a neighbourhood so infected the disease is endemic, as manifested by the fact that again and again the disease recurs—that after a few months of seemingly complete disappearance the disease crops up and runs a more or less severe course. The time of its disappearance may be merely one of hibernation, or the climatic conditions may be unsuited to the activity or the evolution of the bacillus of the disease; but when a sufficiency of time elapses or the requisite quantity of heat, moisture, and whatever else is necessary to the growth of the bacilli are attainable the revival of its infective power is speedily manifested. Whilst comparing malaria and plague as miasmatic disease it is not to be inferred that there is any bearing in the relation of the one to the other. In fact, Dr. Mouchard, writing from Yunnan, cites the cases of Mentz, a town on the hills, and Manhao, a town on the river 3600 feet lower. In the former plague is endemic, but in Manhao malaria is so great a scourge that the Mentz muleteers refuse to spend the nights in the town.

Infection of, and by, animals.—In support of plague being a soil-bred—a miasmatic—disease is the fact, so often announced, that rats are invariably affected. From Canton, Hong-Kong, Macao, Pakhoi, Yunnan, from hills in the north-west provinces of India, and, most recently of all, from Bombay the observation is constant, definite, and most pointed. The first time particular notice is taken of the death of rats in connexion with plague is in Mr. Rocher's report on the Yunnan plague, some twenty years ago. The Chinese firmly believe the poison emanates from the soil; so far is their conviction carried that they estimate with mathematical precision its gradual rise above the ground. The graduation is estimated by the successive animals that are attacked. The sequence is affected apparently by the height of the animal's breathing apparatus from the ground, the small animals being the first seized and the larger or more elevated animals the last to be attacked. Rats, poultry, pigs, dogs, goats, sheep, cows, buffaloes and last of all man as being the tallest of these is their scale of infection. This is not to be taken seriously but the infection of some of these animals is undoubted.

Rats.—On all hands rats are reputed to behave peculiarly and with a wonderful constancy. Before, or it may be during, an epidemic of plague, or before the individuals in any particular house in an infected locality are stricken, the rats leave their haunts and seek the interior of the house. They seem careless of the presence of man and run about in a dazed way with a peculiar limping jerk or spasm of their hind legs. They are frequently found on the bedroom floor, or on the tables, but not unfrequently their death is known by the putrefactive odour of their decomposition arising from beneath the flooring. So pertinent has this rat affection become, that during the epidemic in Macao in 1895, the Chinese and Portuguese left their houses when the diseased rats invaded their premises. The cause of the rats' behaviour is undoubtedly disease, and the symptoms tally wonderfully with plague symptoms of man. Dr. Rennie examined them carefully in Canton and noted the following post-mortem appearances: (1) the stomach was distended and filled with particles of food, sand, and indigestible substances, and the mucous membrane was red and inflamed towards the pyloric end; (2) the liver was much enlarged and congested and contained ova of tænia and distoma: (3) there was congestion at the base of the lung present in about 40 per cent.; and (4) glandular enlargement was present in 30 per cent. of those examined. There is no doubt now that the disease in the rat and man are identical. The bacillus of plague has been met with in every case of rat disease of this description where it has been searched for. The infection of the rat is raised from being a mere popular belief into one of scientific precision, and we must now accept the rat at any rate as one animal liable to plague. Whether the rat is affected previously to, coincidently with, or subsequently to, man being attacked is open to question. Is the disease amongst rats a forerunner of its outbreak in man, and, if so, are they a means of infection? These are, of course, two separate questions.

Surgeon-Major S. J. Thomson, Deputy Sanitary Commissioner, North West Provinces, India, who made excellent reports on the outbreaks in Ghurwal and Kumaon in 1886 and again in 1888, writes as follows[1]: "A fact mentioned in the Hong-Kong epidemic by Dr. Cantlie is the great mortality amongst rats. This is also most marked in the case of outbreaks of *matra mari*, a hill plague; but I should add that it is generally observed *before* the appearance of the disease amongst human beings. So well is this recognised by the people that they will sometimes vacate their villages for fear of an outbreak of matra-mari when once this rat mortality has become distinctly noticeable." In Canton, Dr. Rennie writes that "from districts of the city where the diseases had lasted for some time rats entirely disappeared; but in other parts to which plague subsequently extended the rat mortality was most marked. So convinced were the Chinese of the power of the rat to infect that certain officials took steps to have all the dead rats collected, and at one gate as many as 22,000 rats were collected by May 8th, which, taking into consideration the date of the outbreak, must imply that the collection was made in a few weeks. The *Times of India*, Sept. 30th, 1896, contains the following:—"It was known *more than a month ago* to all the people of Mandvi (the district in Bombay where plague first broke out in September, 1896) and to all the municipal sweepers in the district that the rats were dying in thousands all over the districts. They were found dead and dying almost everywhere and in places where dead rats were never found before. The children amused themselves every morning by throwing them from the staircases into the streets and gulleys. The great rat mortality only became known recently and yet what a volume of information was it capable of conveying if it was only rightly used. It is universal history that rat and plague mortality go together; the merest tyro in hygiene knows the fact," &c.

The rat therefore seems to be infected before the human being; and the fact of dead rats being found about the house during the plague epidemic is a true warning that the inmates of the house will in all probability be affected. How is the rat infected? 1. Experiment proves (*a*) that the rat is inoculable and dies from a disease identical with bubonic plague in man: the inoculation of both the blood and inflammatory fluids of the plague-infected is effective; and further, a pure cultivation injected hypodermically also sets up signs and symptoms of rat plague and causes death within a few days; and (*b*) that supplying the animal with plague-infected food, whether flesh or cultivated germs, causes plague in rats. How does the rat in his natural state become infected; by inoculation? We cannot assume that every rat has a scratch or open wound by which it is infected. It is more likely he inhales or inbibes the poison either as a miasm in concentrated form or he ingests it with his food. It may be both forms of infection are at work; and, further, it must not be forgotten that rats are cannibal in their habits, and direct contagion must play a large part, if not the major part, in the general infection of their tribe. That it is some general infection and not a chance inoculation is manifested by their sudden and simultaneous seizure—a seizure so sudden that scores of dead and diseased rats will be found in a single house of any size within a few hours. An interesting observation in connexion with the Calcutta affection is "that although Calcutta was believed to be the seat of plague and the plague bacillus was pronounced to have been proved in six cases no rats died." This was

[1] Brit. Med. Journ., Sept. 8th, 1894.

regarded as a peculiar and, shall I say, an unprecedented condition, but the explanation is simple enough. The rats did not die, as true plague did not exist in Calcutta, the cases of fever with bubonic swellings being found to be minus a toxic bacillus. This is in accordance with all previous experience. The Calcutta form of disease is benign and no record of rats dying during its prevalence has ever been made. Are we to doubt our belief in the diagnostic value of the bacillus or admit a new disease into our category—a benign polyadenitis? It may be we are called upon to do neither, for we have evidence to show that non-virulent forms of the bacillus can be cultivated and that a bacillus can be found in the soil and cultivated which behaves like the non-virulent bacillus extracted from true plague cultures. These points will be discussed later. 2. An observation by Dr. Thomson in the North-West Provinces of India is worth recording. "In these hill tracts the huts are usually double storeyed, the upper storey being occupied by human beings, and the lower by cattle, goats, &c. It is the custom of the villagers to store the grain in pits under the floors of the huts, and the soil is very foul from the excrement of animals &c. The theory among the people is that the rats eat the grain which is often musty. Most of these hill people are very poor and would consume such grain, which is their principal food, even when musty and clearly affected with fungoid disease." It is some widespread source of infection by which the rat is infected. Dr. Rennie tells us that the places from which the exodus takes place are left without a rat to be seen.

If not from grain or from inoculation, whence comes the poison. From the soil? Dr. Rennie found sand and indigestible material in the contents of the dead rats' stomachs. May this sand have been the source of infection? I kept guinea-pigs on soil from the grave of a plague patient who had been dead for two months; the guinea-pigs were not infected, but perhaps the earth had hardly had time to become infected. If the poison is miasmatic and emanates from the soil as a gas or cloud the rat in his close stifling quarters is exposed to a concentrated inhalation. I have already mentioned the soldiers employed in digging out the filth from plague dwellings being seized and the infection was presumed to be brought about by the intensity of the virus. Therefore, we cannot presume that the rat can be infected by a miasm merely. Of the three forms of infection discussed we may safely lay aside inoculation. We may hesitate over the infection by fungoid grain, but although the musty grain would render the disease endemic it could not account for an epidemic spreading to districts where the grain is sound, unless we assume the rat is the carrier. We are left, therefore, either with actual consumption of poisoned material or the concentrated emanation from an infected soil as the means of introduction into the rat's economy.

Snakes.—Dr. Thomson remarks[2]: "Moreover, when rats are thus dying dead snakes also are said to be found about the site in unusual numbers." Later he remarks: "The snakes eat the rats." From the North-Western Provinces of India we also have record of snakes being affected during plague outbreaks. The snake is not observed as one of the animals affected in the list given by the Chinese, but the infection is natural and the infection through their consumption of the rat is feasible. The possibility, however, of direct miasmatic infection must not be lost sight of.

Dogs.—In the *Chinese Customs Medical Gazette* in the forty-seventh and forty-eighth issues we read that dogs died during an epidemic of plague. The observer ascribes it to the dogs eating the flesh of human beings or any other animal dead from plague. In the same paper it is described that in Yunnan the dying are removed out of the houses to repose in the streets in accordance with Chinese customs, and that those dead and dying from plague are found outside the dwellings or even outside the town walls. He has, moreover, seen the dogs eating the flesh of those dead from plague. In Hong-Kong we had no special mortality amongst dogs, nor have Canton or Macao anything to say on the subject, but the dead were better cared for than in Yunnan and no dog could get at them. It would seem as though the dog were infected by eating the flesh. In the places mentioned such an opportunity was not afforded him, but in the town of Mentz, Yunnan, the custom as to the disposal of the dying seems to explain the infection of the dog.

[2] Brit. Med. Jour., Sept. 8th, 1895, p. 560.

Pigs.—It is even more important to ascertain whether or no the pig is infected. Pork is largely consumed by Chinese; and, moreover, Europeans in the East seldom or never eat Chinese fed pork. The Chinese died from plague, whilst the Europeans enjoyed an immunity from the disease; nothing seems more conclusive than that pork was the infecting food. Moreover, most of the pork brought to the Hong-Kong market comes from Pakhoi, a town where plague has been endemic for years. The first point to be settled is—Does the pig suffer? Not as a rule. The pigs from Pakhoi showed no falling off in numbers, and they were not sickly; the former condition would have obtained had plague thinned their numbers in Pakhoi, and the latter would have been found out when they reached Hong-Kong, where careful inspection of all food supplies is made. Dr. Mouchaud writes that the pigs died in Yunnan, and he states that "we saw on some roads dogs and pigs feeding undisturbed on corpses which no one cared to bury. These animals fell victims to their greed and succumbed to the scourge." Farther, plague has been produced in the pig experimentally, all of which goes to prove that pigs die from plague after consumption of corpses dead from plague and inoculation; but that pigs are not primarily liable to plague in the same way as rats and pigeons seems conclusively shown.

Oxen, sheep, and *goats* are not known to be subject to a disease allied to plague, nor are they affected by any fatal malady during the time plague is epidemic. As regards sheep, Custaldi states that plague in Kurdistan was preceded by a fatal epizootic among sheep; that they had plague, however, is not stated.

Jackals are known to be subject to the disease in Yunnan. They are more prone than either dogs or pigs to consume exposed human bodies, and therefore are very likely animals to be affected.

Pigeons.—Dr. Surveyor, in a private letter to me dated Nov. 13th, 1896, Bombay, asks: "Did you notice any mortality amongst *pigeons* from this disease?" In reply I have to state that I did not, nor did any observer in China, so far as I know, draw attention to the infection of pigeons. If stored grain is the source of infection it is easy to imagine that pigeons would be perhaps one of the most likely species of birds to be affected, and it but draws attention to the disease of grain still more pointedly than before. Several observers in India are most decided in their statements as to the grain source of the disease, and that the rat and pigeon are the sufferers seems to point somewhat in that direction. On the other hand, it must be remembered that the ordinary barn-yard fowls are not (except in the London Plague of 1111 A.D., and it is so long ago that it may be discounted), so far as we know, struck down by any disease resembling plague, so that, although the grain origin of the disease may be worth investigating, we cannot turn towards it with any *a priori* hopes of elucidation. It will be seen at once that the infection of birds will render the possibility of the rapid spread of plague on its appearance in isolated districts easily explainable. It is not comfortable news that we have a winged distributor of plague.

To sum up our knowledge, we find that pigs, dogs, rats, snakes, jackals, and pigeons are affected by a fatal malady, whilst plague is epidemic amongst human beings. Pigs and dogs are believed to be attacked only after consumption of plague flesh. Snakes by the swallowing of rats, and possibly jackals, are infected in the same way. None of the purely herbivorous animals, horses, donkeys, oxen, sheep, goats, or rabbits, are attacked. It is the flesh-eating animals which are the sufferers. Of course, the rabbit, guinea-pig, and a number of animals can be inoculated experimentally or made to consume plague-diseased food, but no herbivorous animal acquires it by the natural processes of infection. If it is by consumption of flesh that animals are infected, how do human beings get it? The animals affected seem to become infected from flesh: the snake from the rat, the jackal, pig, and dog from eating the flesh of persons dead from plague; but how does the rat become infected? Could we find that out we should likely know how man is infected. One animal missing in the scale is the cat; if rats perish from plague surely the mortal enemy, the cat, would be diseased. Perhaps the instinct of the cat teaches it to avoid the diseased rat. [In Hong-Kong during 1894 many cats died in a peculiar way—the chief symptom being paralysis of the hind legs.]

In the discussion about the rat infection it must never be forgotten that if we take it for granted that the disease attacks rats before human beings become victims, we must consider the question, "Has the rat ailment to do directly

with the subsequent outbreak in man?" It is very difficult to see how the rat could affect man except by *infection*; and one may hesitate to believe, from what we know of the concentration of poison necessary to infect, that such is possible. It might be that the diseased rat, by *treading*, or dropping upon, or biting the food of man, would thereby poison the food. It will at once occur to one that sick rats, like sick men, would not eat. This we have no proof of; in fact, it is the other way, for Dr. Rennie states that in his post-mortem examinations on rats in Canton he found the stomachs pretty full of food, and rats during incubation and first days of illness from experiment eat fairly well. What we may conclude from the study of the infection of animals is: (1) that the rat is the animal most liable to be attacked by plague; (2) that rats suffering from, or dead from plague may infect other animals, such as snakes and jackals, who consume them; (3) that rats are always affected by a disease similar to plague at the same time man suffers; (4) that the rat may infect man, but the means of conveying the contagium is not known; and (5) that during the prevalence of benign plague, pestis minor, rats do not die.

Incubation.—The time intervening between exposure and the development of plague has been carefully observed and noted throughout many epidemics of this century. The conclusions arrived at by all who have written an account of their Hong-Kong experience gives from three to six days as the period of incubation. Dr. Lowson makes it seldom under three or over six. Professor Aoyama gives it at from two to seven days. If by that statement he means from the end of the second until the beginning of the seventh day his recorded observations agree exactly with Dr. Lowson's and others. Only one case seems to break the record: it is a case referred to by both Dr. Lowson and myself. A Chinaman in the gaol at Hong-Kong developed plague after being nine days under lock and key. From June 11th until the 20th he was apparently well, but on the evening of the 20th he became feverish and developed plague. This case gives nine days as the apparent period of incubation and may be taken as the limit in that direction. Dr. Lowson states, however, that the man complained of being ill for two days before being placed on the sick list, thus reducing the period to the seventh day; and although the man was put in the cells on the 11th it was not until the 12th that he was really beyond contact with the outer world. Further, during an epidemic of any kind, isolated cases occurring here and there in the infected centre, where contagion seems difficult to explain, must not be taken as sufficient to seriously arrest attention even when a gaol wall intervenes. An infected area is one in which any dweller may succumb to the disease despite all precautions of isolation. Whilst mentioning this case I do not think we have evidence to place the period of incubation of malignant polyadenitis beyond the end of the sixth day after exposure. Be it observed, however, this extends only to plague infection during an epidemic.

There is a notification of two or three cases of plague as having occurred at the Seamen's Hospital, Greenwich.[3] The following is a statement of the facts: "About the middle of September a man, a Portuguese-Indian steward, was taken into the Branch Seamen's Hospital and died there very suddenly. He was only in about forty-eight hours and no suspicion of plague arose. On the last day in October there was reason to consider that another patient at that time in the hospital was suffering from plague; the previous case was thought of, and it was agreed that if one was plague the other in all probability was of the same nature. The man died; but the medical authorities were not in entire agreement. As a precautionary measure, however, the body was buried in a leaden coffin. The matter was referred for bacteriological examination, the glands of the body were examined, and a bacillus which presented the known characters of the plague bacillus was found." In connexion with this subject there are one or two points calling for comment. 1. The dates given (if correct) would show the vessel, in which the infected persons were, left Bombay about the end of August. Now, we have no direct medical evidence that plague existed in Bombay during August. The earliest official intimation of plague in Bombay was when Dr. Viegas reported, at the meeting of the Sanitary Committee on Sept. 23rd, 1896, that the disease had prevailed in the locality for a fortnight, thereby assigning Sept. 9th as the date of commencement. The first case, therefore, at the Greenwich Hospital could apparently not have been infected from that source, as the vessel could not have been less than seventeen days on the way. Either it is not plague we are dealing with at Greenwich (I firmly believe it is) or the infection must have come from some other source than Bombay; or yet a third condition may obtain, which heretofore we reckoned not of—namely, an indefinite period of incubation, during which period "benign" plague may become malignant. This subject will be discussed later.

[3] Brit. Med. Jour., Dec. 12th, 1896.

In elucidation of these cases and the source of their infection I think I can throw some light. I stated above that there was no official evidence of the presence of plague in Bombay before Sept. 9th, 1896—that is, ten days after the first Greenwich Hospital patient sailed from Bombay. This, however, may not be quite correct, for I find in the *Times of India*, Sept. 30th, 1896, the following statement:—

"In Bombay for two months certainly, in all probability longer, the native inhabitants of the neighbourhood of Maudvie, when plague broke out in Bombay, seemed to have been alive to the fact of the existence of a malady resembling plague before the malignant type developed. They had organised processions in August to propitiate the goddess of Plague. This either proves that true plague was present long before the authorities knew of its existence or that a disease resembling plague was mistaken for the malignant type." According to this evidence plague may have existed in Bombay in July, 1896. This evidence will, I hope, help those who are dealing with the Greenwich Hospital cases to disentangle the incubation period difficulty. The second case reported from the Greenwich Hospital had been on shore fourteen days before falling sick. Therefore, allowing seventeen days for the voyage, thirty-one days must have intervened between exposure in Bombay and the illness.

The occurrence of several cases of pestis minor in Calcutta, in which the bacillus was found, indicates a more cautious acceptance of diagnosis resting solely on bacillary evidence than we have heretofore contemplated. The first case dealt with and reported upon in Calcutta gives an instructive history. The patient, a lad aged seventeen years, came from Bombay, where evidently he had been exposed to infection, as his sister, who accompanied him, had seen several cases of plague in Bombay. Fifteen days before leaving Bombay he had noticed swellings first in one groin and then in another, but never felt ill until his arrival in Calcutta on Sept. 24th. He was seen and carefully examined in Calcutta by honest observers, and a diplobacterium identical with the Kitasato bacillus was found in his blood. Not only so, but the clinical symptoms of plague were most manifest. It would, therefore, seem from these two well-authenticated cases that glandular swellings may attack a dweller in a district where true plague rages, and that at a subsequent period (a period which in the Calcutta patient was not less than twenty days and in the Greenwich Hospital case could not be under seventeen days) may become virulent and kill the patient by a true plague; in fact, that a pestis ambulans may become a malignant polyadenitis in the same person, even although the patient is removed from the infected zone. This may be true, although it is not at all a comfortable doctrine; but I can come to no other conclusion having regard to the evidence before me. The incubation period of plague, therefore, may be fixed as from three to six days whilst an epidemic rages, but the evidence to hand, within the last few weeks from Calcutta and from London, renders the period of incubation of ambulatory plague uncertain.

Invasion.—The onset of the disease in malignant polyadenitis is known to be usually sudden and severe. The patient is seized with headache, fever, and prostration and compelled straightway to seek his bed. In a few hours or a few days a swollen gland develops and the disease runs its course. But we have on record many cases where high fever existed and the patient did not even feel ill, or where a gland swells up with no general feverish state. Dr. Lowson in his valuable report states: "In one case I took the temperature of an Indian who *looked* ill, but who had merely come to see about the burial of a friend and who complained of no unpleasant symptom. He was rather amused at my using the thermometer, but I found he had a temperature of 103° F. and at the same time discovered a small cervical bubo." Be it observed, as bearing upon the intensity of the virus, that this was a non-fatal attack of plague. In many cases a

bubo may precede the fever, the patient suffering no inconvenience even. Such a case is that recorded from Calcutta, where "the patient, a boy from Bombay, had had for fifteen or twenty days before developing fever a swelling in either groin. Subsequently he developed the ordinary symptoms of plague and the diplococcus was found in his blood." These two cases are sufficient to show that fever or plague may exist and the patient not be aware of it, and that glands may be affected for a fortnight before the disease declares itself in the usual way by headache, fever, and prostration. The onset of the disease, therefore, even during a plague epidemic, may not be so definite as we should like to believe, and as yet we have no charts recording the condition of the patient between the time of exposure and the invasion.

Varieties.—It is not my intention to mention merely the varieties of symptoms which predominate at any one time or throughout any one epidemic, but to draw attention to varieties which are so pronounced in their character as to justify the belief that whilst dealing with this subject we are actually attempting to bring in line under one heading diseases which may be even separate species. The commonly accepted types are these: (1) abortive (or larval) plague; (2) typical plague; and (3) fulminant plague. The two latter are so well understood and have been so largely and fully dealt with elsewhere that there is no advantage in recapitulating what can be read in any text-book: but I wish to draw attention to the first-named. The abortive form is sometimes styled larval, ambulatory, or pestis minor. The names partly declare the character of the disease and create a condition so apart that it has at all times been separately described. It is at the same time so indefinite in its duration, so unstable in its relation to malignant plague, and so uncertain in its onset and departure that up to the present no scientific precision has been assigned to the relationships. As long ago as the year 1666, when plague ravaged London, we have it on the authority of Sydenham that "at times tumours may break out without either fever or any important symptoms. . . . Those to whom this happens may walk about in public as usual and attend to the common duties of life. . . ." Fodere, writing of plague in 1820, observes: "In the Levant and in the Marseilles epidemics of 1820 cases were to be seen which were not ushered in by any alarming symptoms and where the natural functions were undisturbed and where buboes and carbuncles appeared without fever or only with slight fever, or the buboes went on to a healthy suppuration more or less prompt, or even disappeared and went on to resolution without the help of art, without any inconvenience, and with a perfect integrity of all the functions. This state is comparable to benign small-pox, during which children play together and walk in the streets without any precautions, no care being taken of their treatment and yet terminating favourably. It is the benign plague of authors which is observed when the disease commences and when it is at its end, though it is rarely seen in the middle period, which is entirely devastating, *but it is not less plague and it no less merits the attention of physicians and magistrates.*" Again, in all recent epidemics in Tripoli, Mesopotamia, and Astrakan non-fatal, mild bubonic disease occurred both before and after the epidemic. We have it on the authority of Dr. Dickson that in Mesopotamia, previously to the manifestation of plague, glandular swellings free from fever prevailed. All this evidence seems to indicate a close connexion between benign and malignant polyadenitis; but we have some evidence of the separate existence of the two diseases. 1. In Mesopotamia Tholozan records: (*a*) that mild non-fatal bubonic plague existed from 1856 to 1865, during which period (nine years) no malignant type was observed; and (*b*) that after the epidemic of malignant plague (1866 67) passed over the same form of mild plague existed. Did it exist during the epidemic? This is not known, for it is not likely that persons suffering from so mild an ailment would present themselves for treatment to foreign medical men at a time when all swellings were viewed with suspicion. There is, therefore, no evidence to show that the two diseases did not co-exist seeing that it existed nine years before and perhaps as long afterwards. The present belief is that the mild develops into the malignant type, and when that subsides it is once more deprived of its malignancy and becomes benign. We have no evidence of any disease behaving in such a manner to such an extent as claimed for plague. 2. In Calcutta six years ago an outbreak of mild, non-fatal plague occurred in the fort amongst the troops, but it was not followed by the malignant variety. 3. At the present moment in Calcutta there is reported to be a form of fever with glandular swellings, and also a form of glandular swellings without fever, and it is further stated that these are constantly met with in medical practice in Calcutta. 4. In 1890 the variety of idiopathic buboes, of glandular swellings with fever, and of mumps met with in Hong-Kong before referred to was not followed until four years afterwards by plague. These records go to prove:—1. That long periods of time may intervene between the prevalence of specific glandular swellings and the outbreak of malignant plague. 2. That glandular swellings may exist for nine years before malignant plague appears, and continue for years after it has disappeared. 3. That independent outbreaks of glandular swellings (pestis minor) may come and go and no plague supervene.

The latest evidence we have from Calcutta is conflicting in the extreme. We have it to hand on trustworthy evidence that people are suffering from fever with glandular enlargement, that the disease is regarded as pestis ambulans—a mild bubonic plague—and that *the diplo-bacteria of plague are found in the blood.* We have hitherto regarded the presence of the bacillus in the blood as the one token of the disease being malignant in type; but we have now contrary evidence to consider, and if we are to accept it, we must believe that specific glandular swellings in the plague belt may be caused by a definite bacillus, and at the same time admit a varying degree of malignancy to that bacillus. Professor Cunningham—a most competent observer—declares that the bacillus found in the Calcutta cases is non-infective, and that probably it is not the same bacillus as that described by Kitasato in 1894. This is stated in the face of positive evidence by careful observers which cannot be set aside thoughtlessly. Time alone will answer this question. In the meantime, however, it is feasible to suggest that there may be but one bacillus, and that according to its state of development, or in consequence of its evolution, different types of the disease may prevail in the human body, each associated with a definite train of symptoms, characterised in the one by glandular swellings merely and in the other by a toxic infection of extreme intensity.

The bacillus.—The bacteriology of plague began with the advent of Kitasato from Tokio during the Hong-Kong epidemic of 1894. On June 14th, 1894, Kitasato demonstrated the bacillus, which was confirmed afterwards by Dr. Yersin of the Pasteur Institute in Saigon, working in an independent manner. The bacillus has been variously described as (1) a diplococcus; (2) diplococcus enclosed in a delicate capsule; and (3) a short bacillus with the ends somewhat rounded and a clear space or band in the centre. Professor Woodhead writes:—"The size varies considerably according to the staining method employed, the organism appearing rather smaller in the watery gentian violet solution than in the glycerine fuchsin solution. It is plain that the size of the capsule and its staining capacity vary very considerably, and it is quite possible that this appearance of a capsule is like that which is sometimes met with around the bacillus of anthrax stained in special solutions in that it may be simply a refraction from the albumin from the constricted bacillus due to the drying and other processes of preparation." In the figures drawn by Woodhead an organism was met with in some specimens which seems to indicate a development after death. The last statement may be the most important of all, and its confirmation will be anxiously looked for during the present outbreak in India. It may be the first step towards a knowledge of the life-history of the bacillus in the same manner as the flagella of the plasmodium malaria are found to develop in the field of the microscope some half hour after removal from the body. Dr. Yersin undertook some experiments to test the truth of the infection of the soil, the results of which elucidate the toxic nature of the bacillus. He found (1) that a bacillus in some respects resembling in its appearance that met with in the human body was found in the soil of Hong-Kong during the plague epidemic; (2) that the bacilli of the soil and body occasionally behaved similarly in culture experiments; and (3) that the culture specimens of soil bacilli were, however, innocuous, possessing no virulence when injected into mice or guinea-pigs. Dr. Yersin further found that in his cultures of human plague bacilli there were microbes of different virulence, some mildly powerful and some altogether powerless to infect either mice or guinea-pigs. Dr. Lowson, in conjunction with Dr. Takaki, Dr. Kitasato's assistant, found a

bacillus in the soil of the garden near his house which closely resembled the human plague bacillus, possessing most of its microscopic attributes, but showing none of its toxic properties. The district whence the soil was obtained lay within the plague-stricken area, but considerably removed from any infected house.

The conclusions to be deduced from the above rehearsal are:—(1) That plague bacilli vary in size; (2) that cultivation experiments produce bacilli identical in appearance but possessing different toxic and infective powers; and (3) that a somewhat similar bacillus is found in the soil (whether at all times or not is not known) which resembles the non-virulent form the result of bacteriological culture.

Infection of the soil.—The preceding remarks upon finding the bacillus in the soil are pregnant with suggestion. Whether the soil bacillus be virulent or not, whether it be completely identical with the human bacillus met with in plague or not, the fact of a microbe having on the one hand a close resemblance microscopically and on the other hand a structure and behaviour analogous with certain of the non-virulent culture products of human plague bacilli, is sufficiently important and brings the elucidation of the matter within the sphere of practical investigation. The dominant idea before even the bacteriologist or microscopist studied the matter was that the infection arose from the soil, and there seem no facts to go upon to reject the creed. The Chinese grade the scale of animal infection by their height from the ground, and the modern scientist lends some weight to the suggestion. The medium of the soil may be to the infection of animals as the medium of water bearing the carcase of the dead mosquito is to the filarial-infected human being. Not only may it serve as a mere vehicle, but as a host, in which the parasite passes through a stage of its evolution. Bearing closely upon this subject is the question of the *medium* of spread of plague. I previously discussed this shortly when dealing with contagion. Contagion—that is, intimate prolonged contact, as mother or nurse and child—no doubt is a factor, a potent factor, it may be the only factor, in the transmission of the disease, but few admit it to be more than a small element in distributing plague broadcast over a community. The slow progress of plague and its peculiar paths of selection must be considered if the subject is to be fairly dealt with. Plague is perhaps the slowest travelling disease known; it may take months and even years to extend a few miles. From the City of London it took nine months to reach Soho, and more recently it took ten months to travel from Hong-Kong to Macao—a distance of thirty miles. The lines of communication will not explain this, for in Macao thousands of persons sought shelter in 1894, when Canton and Hong-Kong were plague-stricken. Steamers and Chinese junks and fishing-boats passed freely between the ports, yet Macao did not become infected until nine months after Canton and Hong-Kong were pronounced clear. How did the parasite reach Macao—by sea from Hong Kong or by land from Canton? If by sea, in all probability it would have been in Macao long before. If by land, how did it travel—by human or animal carriage or by the soil? If by human beings, it means intimate prolonged contact of the carriers, if by the soil it means a bacillary infection of the soil, spreading from a centre and extending by a continuous margin of active growth along paths favourable to its nutrition. As a gangrene spreads from a centre, or a patch of ringworm starts to spread and gradually involves an ever-increasing zone, so may the soil become sown with the germ of plague, and animals that have their habitat thereon fall victims. Some show of testimony towards such a view is afforded by the fact that plague confines its working to the Old World and does not cross the ocean, and travels backwards and forwards in the belt of its selection; but it cannot be the only means of travel, otherwise how did the islands of Britain and the Canaries ever become infected at one end of the Old World and the islands of Hong-Kong and Formosa at the other? Were the soil only the producer or infector all islands in the area ought to be immune. This not being so, it comes that the poison must be carried by human beings, by animals, by clothing, or by food. That the poison conveyed by them may require the soil as a medium to reproduce the infecting bacillus may be quite possible; but that some other medium than the soil capable of transmitting the disease is quite evident, is As noticed above, the bacillus found in the soil, according to Dr. Yersin, agrees in most points with the plague bacillus except that when introduced artificially into the bodies of animals it is non-virulent. This may indicate, of course, that they belong to another group of the bacterial family altogether.

THE ACCOMPANIMENTS OF PLAGUE.

Climate.—The weather does not escape blame for a share in the presence of plague when it rages in the midst of a community. Be it dry, the drought is mentioned as a cause; be it wet, the floods which ensue are held to have damaged the crops and the grain supply is spoiled, or the miasm resulting from the subsidence of the swollen streams is connected with the outbreak. In south-east China the epidemic of plague developed at the end of a prolonged and exceptionally dry season. The rainfall was so deficient that most of the wells throughout the district were exhausted, and the crops suffered severely. Without driving the argument of drought too deeply home it must, however, be observed that in Bombay we find a similar condition of things before the present outbreak. The rainfall over a wider area of country has been so greatly deficient that widespread famine has followed. Without recording any more examples we must consider whether there is any probability of connexion between drought and plague. The bacillus of plague flourishes best in a warm, moist atmosphere; dry, hot air kills it. In many marshy countries, however, the epidemic has been found to disappear the moment the rain ceased and the dry season set in. In Mesopotamia and in Egypt the epidemic dies out in summer, when the nights and days are more alike in temperature, and the fall of dew is therefore less pronounced. The absence of rain means, of course, dirt in the houses, in the streets, and on the clothes and bodies of the inhabitants; and dirt is held to be the foster-parent of plague. But the absence of rain means dryness of soil, and if the bacterium is dependent on a sufficiency of moisture it would seem as though a small quantity satisfied it.

Rain.—In Hong-Kong it was hoped in 1894 that with the advent of rain the epidemic would abate. The rains delayed their onset until well on in May, by which time the epidemic had got a hold in the town. With the rains came an accession—a marked accession—of the number of plague cases. The flushing of the drains and gutters and the replenishing of the wells with a plentiful supply of water were attended by an increase in the outbreak. Before referring this positively to the effect of procuring a more moist nidus for the bacillus to develop in, the effect of rain on the habits of the people has to be noticed. In all warm climates a number of the male portion of the inhabitants sleep out of doors—on the roof, in the street, or in verandahs. The effect of rain is to drive all such sleepers within the house, to shut the windows and doors, and to generate all the evils of overcrowding. The good effects of the flushing of sewers are undone, in the opinion of the climatological argument, by the overcrowding which it causes.

Heat and cold.—In Canton the plague commenced when the temperature averaged about 60° F. and continued when the average daily temperature reached 90°. Further, it must be noted that the disease *disappeared* when heat and moisture were about 90° throughout the district, so that with regard to the common statement that it thrives best at a temperature between 80° and 85°, it must not be forgotten that whilst thriving it also disappears at the same temperature. It dies out when the conditions which we believe to be suitable for its propagation, heat and moisture, are at their best. But heat does not seem to be an essential to the appearance of plague. In Russia it has appeared again and again in winter with deep snow on the ground and the thermometer in the neighbourhood of zero. In Astrakan in 1878 the disease raged during severe winter weather. We are at a loss, therefore, to connect warmth with plague or cold weather with its check. We may experimentally show how the bacillus behaves under the abnormal medium which must necessarily surround it in the microscopic field, but that in its natural state it is so affected we have direct antagonistic proof.

Overcrowding.—The argument of overcrowding might be at once set aside by the sweeping statement that just as plague flourishes in crowded cities, so likewise it flourishes in barren deserts, where the population is sparse in the extreme. An analogous disease, typhus fever, behaves in well-nigh the same way, and typhus fever is looked upon as the direct outcome of overcrowding. Now overcrowding may take place in a country house as readily as in a town house, and the

poorer the country the greater the overcrowding. Typhus fever prevails in isolated houses on the west coast of Galway, where the air around is of the purest; but eight or ten people or more in one room, not only sleeping there for warmth but residing there well-nigh all day when the weather is inclement in winter, will foster any disease that foul air is capable of producing. As with typhus fever, so with plague. The rains in warm climates drive the inhabitants within their poor dwellings, the snows of winter do the same in colder climates, and the ailments attending overcrowding are most likely to appear. In other countries, as in Mesopotamia, the cessation of rain brings the cessation of plague, as the people can issue forth to sleep and open their casements without fear of being drenched. The close, intimate contact believed to be necessary for the propagation of plague is therefore brought about by two entirely opposite conditions which have overcrowding in common; and taking all the effects of weather into consideration it would seem that not the meteorological conditions but the mechanical results of weather generally are to be reckoned with. Castaldi's account of a dwelling-house in the highlands of Kurdistan, where one might expect that fresh air would be plentiful and overcrowding unknown, confirms the above statements. "Whatever is most afflicting in poverty, whatever is most revolting in filthiness, is accumulated as if designedly around these infected dens in the interior of which live—or rather vegetate—from fifty to sixty men, women, and children." Perhaps the effects of overcrowding are more frequent in the colder latitudes of Western Asia and Eastern Europe than anywhere else in the world.

Poverty.—Plague is ever associated with scarcity and want. Sometimes it is famine caused by the destruction of crops by floods, sometimes by drought; but from whatever cause plague and scarcity of food are frequently allied. Not only is the grain scarce, but it has often been commented upon that it is bad, musty, covered with blue mould, and fermented. The two conditions may be to each other as cause and effect. The grain is gathered before it is ripe owing to the people's necessity, and the unripe grain not only yields insufficient nourishment but is apt to undergo fermentation and be attacked by vegetable parasites. In South-East China there was no question of famine before the 1894 outbreak, but the price of grain was high. This was caused by the prolonged drought in the district and by the failure of the crops in Siam—Bankok, the capital of Siam, being the chief source of rice supply to Canton and district. The rice was subsequently obtained at a fairly cheap rate from Saigon, the capital of Indo-Chine, and the price of grain fell. In India at the present moment a serious scarcity prevails and famine threatens. The prolonged drought is the cause of the failure of crops, and, moreover, the consumption of diseased grain is universal. Three elements are in evidence—drought, famine, and diseased grain; but they are really co-partners and inter-dependent. No one can be upheld as the cause to the out-voting of the others. It may be none of these have aught to do with the presence of plague, as it may be argued plague exists when famine is unheard of; but the combination which also means overcrowding of houses must be a factor, if not the chief factor, in the propagation of the disease. In the towns, and in the poorest parts of the towns, would be the most likely spots where the combined effects of want and overcrowding would show; and it is invariably in such neighbourhoods plague develops and stays. In the densely packed cities of Asia the poor exist for ever on the fringe of destitution and the least rise in the price of food brings scarcity, so that the term "the poor's plague" holds good for all time.

Sanitary conditions.—The preceding remarks prepare the way for the recognition of all possible sanitary evils and neglects as accompaniments of plague. Chinese towns are at all times ready to generate any filth disease and Hong-Kong itself is but little better. The city was hastily built about fifty years ago, when all too hurriedly tens of thousands of Chinese sought occupation and habitation under the British rule. From that rush of people and feverish haste to build without proper control the city never recovered, and to this day presents sanitary aspects of the most flagrant description. The public sewers are well built on the separate system; the water-supply is most excellent in quality, although, when rains are delayed, deficient in amount; the public latrines are under Government control; the removal of excreta is by the bucket system and is admirably controlled. Here, however, the bestowal of praise must cease, for beyond them there is much to condemn. House overcrowding is rife and surface crowding to the extent of 2500 persons to the acre holds sway over the chief area of the native quarter of the town. Dr. Lowson states graphically what is known to every resident in Hong-Kong: "The majority of the houses of the infected district being in a most filthy condition . . . when to a mixture of dust, old rags, ashes, broken crockery, moist surface soil, &c., is added fæcal matter and the decomposing urine of animals and human beings, a terribly insanitary condition of affairs prevails." At another part of his report Dr. Lowson remarks: "To over-paint the pitiable surroundings associated with plague work at the commencement of the epidemic would be impossible. I have entered a long low cellar, without any window opening, and with the air entering only by a square open shaft from the level of the roof three or four storeys high. Down one side of the shaft ran a broken earthenware drain-pipe leaking freely, the contents streaming down the wall of the air shaft to a shallow pool of filth which crossed the undrained floor of earth. Although it was broad daylight outside a lantern was necessary to see one's way. On a miserable sodden matting soaked with abominations there were four forms stretched out. One was dead, the tongue black and protruding. The next had the muscular twitchings and semi-comatose condition heralding dissolution. In searching for a bubo we found a huge mass of glands extending from Poupart's ligament to the knee-joint. This patient was beyond the stage of wild delirium. Sordes covered the teeth and were visible between the parted and blackened lips. Another sufferer, a female child about ten years old, lay in the accumulated filth of apparently two or three days, unable to speak owing to the presence of enlarged cervical glands. The fourth was wildly delirious (the conjunctivæ intensely congested) and was constantly vomiting. The attendant (*sic*), the grandmother of the child, had a temperature of 103° F. and could only crawl from one end of the cellar to the other. She was wet through and was herself doomed. This is no fancy sketch, but a true picture of how we found some of our patients at the outbreak of the scourge in Hong-Kong." The evidence from Bombay is similar to the Hong-Kong report, and but confirms the state of overcrowding and filth to which Oriental cities, even when partially under British control, may attain.

Caterpillars.—At the time the plague broke out in Hong-Kong and Canton the district was infested by a caterpillar which covered the trees in myriads and destroyed the foliage of many. So threatening was the pest that the Colonial Government in Hong-Kong granted a reward of so much per basket to the collectors of these animals. The accident of their presence may be fortuitous merely and have nothing to do with the presence of an infective bacillus; but there can be no doubt that the destruction of plant life on the mainland of China from this cause had to do with the high price of grain which prevailed at the time plague broke out.

Diseased grain.—That one is justified in looking to grain as a source of infection we have collateral confirmation from other diseases arising from grain. 1. Ergot of rye—the mycelium of Clavieeps purpurea infecting common rye—is capable of producing epidemics attended by a great mortality. In France, Russia, and Sweden, even during the present century, outbreaks of what the Germans style "Kriebelkrankheit" have occurred. 2. The pellagra of Lombardy is a disease of modern times, but corresponds closely in time with the introduction of an inferior kind of maize as the staple food of the peasantry. This disease is at times epidemic, and although it can be traced to want of care in the drying and preparation of the grain, once it breaks out in a neighbourhood it takes hold of members of the community who feed on the best kind of materials. 3. Acrodynia has so close a resemblance to ergotism and pellagra that it is presumed to be connected with bad grain, although the connexion has not been traced. 4. Pelade—a disease met with in Columbia, South America—is traced to the ergot parasite of maize. 5. Actinomycosis is due to a fungus—probably of the order Cladothricæ,—is even better known than either of the preceding, and the general evidence is that it is introduced with the food. 6 In the uplands of Kurdistan the four following conditions co-existed or followed in sequence during the 1870-71 outbreak: (1) bad grain; (2) ergotism; (3) epizootic amongst sheep; and (4) plague. 7. At the present moment in Bombay diseased grain is plentiful, and it would seem that Dr. Watson has succeeded in proving a connexion

between plague and diseased grain. With the help of modern methods of investigation and the accumulated knowledge of the disease gathered during the last few years the matter should not be difficult to settle. These instances might be multiplied, but they are sufficient to show that the search for the cause of plague in grain is not a blind hunt, but has creditable precedents.

Differential diagnosis.—In all cases nowadays the microscope is regarded as the one test whereby to test the presence or absence of plague. Rightly or wrongly this conclusion has held good ever since Kitasato discovered the bacillus in June, 1894. The names given in an earlier part of the paper indicate the diseases held to be closely analogous to plague. They are "typhus," "adynamic typhoid," and "intermittent fever"; but the word "bubo" is affixed to all. Still the name gives the drift of its applications and enables us to apportion its place in the category of disease.

Typhus fever.—The resemblance to typhus fever, in many signs, symptoms, methods of spread, and circumstances of development, is worthy of more than a passing remark. It has been noted how overcrowding, whether in town or country, is a potent factor in plague as in typhus fever. Hæmorrhages—so characteristic of typhus fever—are so frequent in some outbreaks of plague as to occasion the use of the synonym of "hæmorrhagic fever." The infectious nature of the two diseases appears so similar, so markedly "catching" to all inmates of an infected house, so sparing in their seizure of visitors. Such instances of the resemblance between the diseases might be multiplied with the result that we might become converts to the opinion expressed by Murchison that "Plague is perhaps the typhus of warm climates, the two diseases being generated from similar causes and differing only in intensity from the effects of climate and other collateral circumstances." The specially characteristic sign of plague is the presence of buboes; the specially determining sign of typhus fever is the rash. Both may be absent in either; or we may find buboes in typhus fever and petechial eruptions in plague. The eruptions met with in the Hong-Kong epidemic were never characteristic, although many cases showed spots on the skin. These in most instances were no doubt mosquito bites, but the occurrence of a pink blush around them gave a specific appearance to these petechiæ. Further, the distribution of typhus fever corresponds in many ways with that of plague. Typhus fever has a southern limit, not being met with within the Tropic of Cancer in either the old or the new world. Typhus fever has never reached Australia or New Zealand, or appeared south of the Equator. Typhus fever, however, is accredited to have reached the United States and Canada, where plague has never been. With this solitary exception the distribution of the two is synonymous. The pursuance of this subject would lead me far beyond the limits of time at my disposal; but there can be no doubt that we have two diseases generated by a common cause, overcrowding and personal filth; and, if we assume the supervention of a specific microbe upon such states, typhus fever or plague, as the case may be, may arise.

I have yet another disease to add to the list which may be mistaken for plague. On June 26th, 1894, when the plague was at its height, I saw a Parsee patient dwelling in a house in which plague existed, suffering from fever (104° F.) dry tongue, headache, backache, and large swollen glands in the left groin which had suddenly appeared. Plague seemed the only diagnosis, and the man, much against his will, was sent to the plague hospital. In two days he came back again quite well, and on examining him I found his urine thick and milky. That night I found filaria in the man's blood, and knew I had made a mistake in the first instance. Of course, the mistake is most likely to happen, but nevertheless it is not pleasant to think that we had subjected the man to the terrible danger of plague infection.

The conclusions drawn from a study of the spread of plague are:—I. Varieties: 1. The varieties of plague known under the names (*a*) fulminant, (*b*) typical, and (*c*) pestis minor, are allied. 2. The cause of fulminant and typical plague is a diplobacterium in the blood and tissues. The cause of pestis minor may be an allied diplobacterium, but with a lesser toxic power. 3 An appropriate name for the fulminant and typical plague is "malignant polyadenitis." An appropriate name for the mild variety (pestis minor) is "benign polyadenitis." II. Infection and contagion: 1. Plague is infectious chiefly by the dust arising during the cleansing of dwelling houses which plague patients have occupied. 2. Plague is contagious by prolonged and intimate contact with the plague-stricken, as in the case of a nurse carrying a child ill of the disease. III. Distribution: 1. Plague is met with in a definite area of Asia which may be termed the "plague belt." 2. That the home of plague at the present day is Mesopotamia and the countries adjacent. 3. From Mesopotamia as a focus the plague may spread northwards to the Caspian Sea, westwards to the Red Sea, southwards as far as Bombay, and eastwards as far as (Formosa) the China Sea. 4. During the present century plague has shown a western retrocession and an eastern accession of virulence. IV. The bacillus. 1. Typical plague (malignant polyadenitis) is associated with pestis minor (benign polyadenitis). 2. A bacillus of somewhat similar appearance microscopically is reputed to be found in both.[4] 3. The bacilli differ in their toxic powers only (?). 4. A benign polyadenitis may run its course without being preceded or followed by the malignant variety. 5 Malignant polyadenitis may run its course without being preceded or followed by the benign variety. 6. The bacillus of the benign variety attains malignancy by passing through some intermediate host, possibly, but not probably, the rat.

NOTES ON STONE IN THE BLADDER.

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I.—Litholapaxy in Girls and Women.

THE great majority of vesical calculi which are met with in girls and women are best removed by litholapaxy. I take it for granted that no one nowadays would dream of employing the ancient method of rapid dilatation of the urethra, with subsequent extraction of the calculus, if called to treat a young girl the subject of stone in the bladder, unless, indeed, the calculus were a very, very tiny one. Dilatation of the urethra with extraction was always a somewhat rude surgical procedure even in adult females, but there was much to be said for it in the days which preceded Bigelow's brilliant innovation in the treatment of stone in the bladder. Any surgeon, however, who at the close of the nineteenth century adopts as a routine practice the old method of rapid dilatation of the female urethra with extraction is behind the age and is hardly to be tolerated. There remain two other methods of removing a stone from the female bladder—viz., vaginal lithotomy and suprapubic lithotomy; but the cases in which they should be employed are few and far between. In most surgical text-books the subject of vesical calculus in the female is usually dismissed in a very cursory and somewhat perfunctory fashion. The scanty attention accorded to it is in some measure due to the fact that stone is so rare in girls and women as compared with its frequent occurrence in boys and men, and partly to the ease and safety with which a stone is removed from the female bladder as compared with the difficulties and dangers which surround its extraction from the male bladder. It falls to the lot of very few surgeons in Europe to treat many females for stone in the bladder, and hence few are warranted in expressing any very decided opinion as to the comparative advantages of the different methods of dealing with stone in females. Mr. Cadge, in his admirable lectures on the surgical treatment of stone in the bladder delivered at the Royal College of Surgeons of England in June, 1886—lectures, which, by the way, everyone interested in the surgery of the urinary organs would do well to study—stated that in 1125 operations for stone in the bladder at the Norwich Hospital there had been only 50 in females, and that in his own experience of 300 cases of vesical calculus he had only met with six in the female. Surgeon-Lieutenant-Colonel Freyer in 864 cases of stone in the bladder has met with only 17 cases in females. Brigade-Surgeon-Lieutenant-Colonel Forbes Keith amongst 1993 cases of stone in the bladder which came under his care in the Civil Hospital, Hyderabad, Sindh, treated 57 cases in females. During the last fifteen years about 900 patients have been admitted into the Indore Hospital, Central India, for stone in the bladder, and there were but 20 females amongst this number. From

[4] This is under discussion now (Dec. 18th, 1896).

these figures, which are sufficiently large to warrant safe deductions, we may conclude that stone in the bladder is about thirty times as common in the male as it is in the female. Appended is a table giving the particulars of the twenty cases of stone in females admitted into the Indore Hospital, and a glance at it will show that 18 out of the 20 were treated by litholapaxy. The last three operations recorded in the table were carried out since I left India. To show what an eminently satisfactory operation litholapaxy is in females of all ages I will very briefly give the histories of some of the more interesting cases in this series.

TABLE I.—SHOWING PARTICULARS OF TWENTY CASES OF STONE IN THE BLADDER IN FEMALES TREATED IN THE INDORE CHARITABLE HOSPITAL, CENTRAL INDIA, BETWEEN MARCH, 1882, AND DECEMBER, 1895.

No.	Age (years).	Caste.	Date of operation.	Nature of operation.	Time occupied by operation in minutes.	No. of lithotrite used.	No. of catheter used.	No. of times lithotrite was introduced.	No. of sittings.	Composition of stone.	Duration of disease in months.	Weight of stone in grains.	Number of days in hospital after operation.
1*	4	H.	23-3-'82	Litholapaxy.	No record.	7	No record.	No record.	1	No record.	No record.	No record.	2
2*	40	H.	1-10-'82	,,	,,	No record.	,,	,,	1	Phosphatic.	,,	,,	12
3*	20	H.	18-3-'86	,,	67	15	16	6	1	Fawn-coloured uric acid with covering of oxalate of lime.	24	395	11
4*	5	H.	27-3-'86	,,	33	7½	7	4	1	Uric acid.	12	23	2
5*	45	H.	17-10-'87	,,	12	6	10	2	1	Oxalate of lime and uric acid.	24	20	4
6*	3	H.	30-10-'87	,,	45	6	8	6	1	Phosphates with nucleus of oxalate of lime.	12	183	3
7*	30	H.	2-6-'88	Vaginal lithotomy.	No record.	—	—	—	—	Phosphates and urates.	36	1140	24
8*	7	H.	12-3-'89	Litholapaxy.	57	6	6, 7, 8, 12, 14, & 15	9	1	Phosphatic.	24	225	1
9†	7	H.	19-4-'89	Urethral lithotomy.	No record.	—	—	—	—	Phosphatic.	60	335	54
10*	3	H.	29-11-'90	Litholapaxy.	48	4 & 6	6	5	1	Phosphates and urates.	15	72	21
11*	50	M.	28-12-'90	,,	14	10½	16	3	1	Fawn-coloured uric acid with phosphates.	12	115	3
12*	7	H.	7-1-'91	,,	49	5½ & 9½	10	7	1	Urates and phosphates.	12	200	3
13*	4	H.	15-4-'93	,,	89	7, 7½, & 10½	10 & 12	14	1	Fawn-coloured uric acid.	30	391	8
14*	40	H.	17-4-'93	,,	21	10½ & 15	18	3	1	Phosphates, with uric acid nucleus.	24	211	6
15*	5	H.	30-4-'93	,,	43	4 & 6	6, 7, & 8	5	1	Oxalate of lime, phosphate of lime, and urates.	36	86	4
16*	18	H.	28-7-'93	,,	70	8, 13, & 15	15, 16, & 17	9	1	Fawn-coloured uric acid.	36	702	5
17*	5	H.	19-12-'93	,,	36	5 & 7	6 & 8	7	1	Uric acid and phosphates.	24	86	2
18*	60	H.	11-5-'95	,,	34	7, 10, 13, & 19	14 & 29 French	7	1	Fawn-coloured uric acid.	36	480	3
19*	5	M.	12-11-'95	,,	25	4 & 8	6 & 8	4	1	Fawn-coloured uric acid.	24	139	3
20*	9	H.	30-12-'95	,,	17	8 & 10	14	2	1	Phosphates.	6	120	3

* Successful. † Relieved.

CASE 5. — A Brahmin girl aged four and a half years was brought to the Indore City Dispensary on Oct. 17th, 1887, suffering from complete retention of urine. Her friends gave the following history: "The girl has laboured under stone symptoms for the last two years, and latterly these symptoms have become aggravated, so much so that she cries and rolls on the ground from paroxysms of pain at each effort of micturition; passes urine about thirty times in the twenty-four hours; was seized with retention of urine early this morning." The native assistant at the dispensary, finding the stone firmly wedged in the urethra, at once sent the girl to me at the hospital. Chloroform having been administered I returned the stone into the bladder with some difficulty, and easily disposed of it by means of a No. 6 lithotrite, which I passed into the bladder twice. A No. 10 evacuating catheter passed readily into the bladder and the operation lasted twelve minutes. The stone, a mulberry one, consisted of oxalate of lime and uric acid and weighed twenty grains. Next day she was walking about the ward of the hospital, and the day after she had no urinary symptoms and passed urine seven times in the twenty-hours. She went home on Oct. 21st, having been in hospital only four days. These mulberry calculi grow very slowly as a rule. Nearly half of this patient's young life had been spent in pain and misery. For how much longer she might have suffered had she not been seized with retention of urine it is difficult to surmise.

CASE 6.—A Rajput girl aged three years was admitted into hospital on Oct. 29th, 1887, with well-marked symptoms of stone in the bladder of one year's standing. Her condition was most pitiable. She was thin and anæmic. For six months she had suffered from great irritability of bladder accompanied by prolapsus ani at each effort of micturition, having no rest at night, and passed urine about forty times during the twenty-four hours. On Oct. 30th I placed her under the influence of chloroform, and passing in a No. 6 lithotrite seized a large stone readily. The bladder resented the presence of the lithotrite and spasmodic contraction of the viscus was very violent, although she was

deeply under the influence of the anæsthetic. A No. 8 evacuating cannula passed readily into the bladder. Whilst working the lithotrite and aspirator my assistant pressed the wall of the urethra against the instruments so as to retain as much urine in the bladder as possible. Nevertheless, a good deal of fluid leaked out of the bladder. I was obliged to use the lithotrite on six separate occasions, and after three-quarters of an hour's work I had extracted the entire calculus. The débris, when dried, weighed 183 grains, and consisted of phosphates and a small nucleus of oxalate of lime. The straining and the very irritable state of the bladder made the operation a very prolonged one. The after history of this case was briefly as follows. On Oct. 31st the patient did not cry when passing urine; there was no prolapse of the anus; she slept well, had passed urine seven times since the operation, and had wetted her bedclothes. There was no pain on pressure over the region of the bladder. On Nov. 1st the morning temperature was normal. The patient had slept soundly during the night. On the 2nd she ate well and had sound sleep, had full control over the bladder, and passed urine eight times in the twenty-four hours. On the 3rd she played about the hospital grounds and seemed quite happy. The change in her condition in so short a time was very remarkable. Her mother took her home in the evening.

CASE 8.—A low-caste Hindu brought his daughter aged seven years to the Indore Hospital on March 12th, 1889, suffering from very urgent stone symptoms. She had suffered for two years and as she had lost control over the bladder was in a very miserable condition. She was at once placed under the influence of chloroform, and I struck a large, soft stone, which I crushed with a No. 6 fully fenestrated lithotrite. The lithotrite was introduced on nine separate occasions owing to the straining of the bladder. No difficulty was experienced in passing a No. 14 evacuating catheter, and on two occasions I passed a No. 15 straight catheter, to which I attached a Berkeley Hill's aspirator. The débris weighed 225 grains and the operation lasted fifty-seven minutes. The girl resided in the city of Indore, and her father took her home the same evening much against the advice and wishes of my assistant, saying, as he left the hospital, that he could not afford to spend any more time on his daughter. If his son had undergone a litholapaxy he would doubtless have spent three or four days in looking after him in the hospital. After all, there is much to be said for woman's rights, and even something for the new woman. My assistant paid the girl a visit four days after the operation and found her playing outside her hut. She had regained perfect control over the bladder and was perfectly well.

CASE 16.—A young woman aged eighteen years, a Bhîl by caste, came to the Indore Hospital on July 28th, 1893, with urgent symptoms of stone in the bladder, which had existed for three years. I broke the stone—a hard one—with a No. 15 lithotrite and finished the operation by means of a No. 13 and a No. 8 lithotrite. Evacuating catheters, Nos. 15, 16, and 17, were employed. The patient strained violently during the greater part of the operation and the fluid in the bladder was rapidly expelled, although my assistant pressed the urethra against the lithotrite while I continued the crushing process. I was compelled to introduce the lithotrite into the bladder on nine different occasions and the operation was therefore a prolonged one, lasting seventy minutes. The débris consisted of fawn-coloured uric acid, and when dry, next day, weighed 702 grains. There were no untoward symptoms of any kind after the operation and she remained only five days in hospital.

There are but two cases in the table appended which were not amenable to litholapaxy and their histories are briefly the following.

CASE 7.—A weak anæmic woman was admitted into the Indore Hospital on June 1st, 1888, with symptoms of stone in the bladder of three years' standing. She gave her age as thirty, although she looked more like fifty years. During the previous six months she had suffered from constant dribbling of urine and her life was a burden to her. Next day, having been placed under the influence of chloroform, a stone was found bulging into the vagina. On passing a small steel sound into the urethra it at once impinged on the stone, which was pressing against the meatus. I tried to pass a small lithotrite, and in endeavouring to do so the urethra gave way at the meatus and the rupture extended backwards for half an inch, so thin and weak had the urethra become by the constant pressure exerted on it by the stone. I therefore extended the rupture by a clean cut of a scalpel for another inch, which included the neck of the bladder, and exposed the stone, which I then found was tightly grasped by the bladder and was perfectly fixed in position. I now endeavoured to crush the stone with a large lithotrite, but this I found not feasible, as there was no room in which I could work the instrument. I accordingly extracted the stone by means of an ordinary lithotomy forceps, but this I accomplished with very great difficulty. Indeed, I was obliged to peel the bladder from the stone by means of a broad director, while my assistant made traction with the lithotomy forceps, so intimately united were the bladder and stone. On extracting the calculus, which weighed 1140 grains and was composed of phosphates and urates, I found it to be a perfect cast of a very contracted female bladder, and on the inferior and posterior aspect of the stone were two well-marked deep depressions, or blind holes, corresponding to the openings of the ureters into the bladder. I then washed out the bladder with an irrigator and brought the margins of the incision together with stout ligatures. The after-history of this case was as follows. On June 4th the ligatures were in position; the wound looked healthy; and urine passed drop by drop. On the 8th one or two of the the ligatures near the meatus had given way; the remainder of the incision co-apted well. On the 13th the greater part of the incision was well joined; there was some gaping near the meatus; the dribbling of urine was much less. On the 16th the patient had more control over the bladder; the anterior portion of the wound in the urethra was refreshed by the scalpel and new sutures were introduced. On the 19th the urine could be retained for two hours at a time. The patient, however, occasionally passed a small quantity of urine involuntarily. On the 22nd urine was passed voluntarily three times during the day and twice during the night. There was no dribbling of urine during the day time, but sometimes a few drops of urine were passed in her sleep. The patient's health was much improved. On the 24th the urine could be retained for four hours at a time and was passed only twice during the night. The patient's husband, who accompanied her to the hospital, insisted on taking her home as the monsoon had set in and he was obliged to look after his fields and the sowing of crops. The patient promised to return to the hospital in a month's time. As a matter of fact this woman never did return to the hospital for treatment, but I have little doubt that she ultimately regained perfect control over the bladder. I question very much if a suprapubic lithotomy would have given any better results than those which followed the operation I was forced to perform. A suprapubic lithotomy in such a case would have been a very difficult operation, for no water could have been injected into the bladder, and fixed as the stone was there would have been considerable danger of wounding the peritoneum in extracting it by the suprapubic route. Indeed, the peritoneum in a case of this kind, where the size of the bladder had been reduced to the dimensions of a small pear, would have descended much lower than it usually does. I showed the calculus removed from this patient's bladder to the Fellows of the Medical Society of London in March, 1891, and a more perfect specimen of its kind does not exist.

CASE 9.—A Hindoo girl aged seven years was admitted into the Indore Hospital on April 19th, 1889, in a most miserable condition, suffering from stone in the bladder and incontinence of urine. Her mother, who brought her to the hospital, stated that the girl had suffered from stone symptoms from her infancy. Placing her at once under the influence of chloroform I found the calculus sticking in the meatus of the urethra. There was a large hole in the bladder into which I could readily insert my index finger. This hole was about an inch from the meatus. I therefore slit up the urethra, and seizing the stone with a lithotomy forceps endeavoured to extract it. In doing so the stone, a phosphatic one, parted in two, and the anterior half came away in the jaws of the forceps. The posterior half of the stone I found firmly attached to the bladder wall and I removed it by means of the scoop and forceps. The bladder and vagina were well washed out by an irrigator and she was removed to bed. The stone weighed 335 grains—a large one for a child of her age. Her health improved after the operation, and with care and rest and good feeding she rapidly grew plump. On May 24th I performed an operation for vesico-vaginal fistula. Such operations in young girls are extremely difficult owing to the limited space

afforded for manipulating instruments, and in order to give myself more room I divided the perineum almost to the anus. Silver wire sutures were employed; a gum elastic catheter was retained in the bladder, and the legs were tied together with bandages. On the 27th the perineal incision and wounds of the urethra and bladder had seemingly healed. Urine was passed by catheter. On the 30th the patient's health had much improved; when the catheter was removed for a few minutes there was dribbling of urine. On June 3rd the catheter was removed for an hour; meanwhile, urine was passed by stream. On the 9th the sutures were removed; urine passed by stream, and the catheter was removed for good. On the 13th the urine could be retained for half an hour, and then was passed by stream, but a few drops came by vagina. On examination it was found that a pinhole existed in the vesico-vaginal septum. The patient's mother, becoming weary of staying in hospital, took the child home, promising to return some months later. She, however, did not keep her promise. Bearing in mind the child's age I am inclined to think that she ultimately made a complete recovery, but to be on the safe side I have noted the result as "relieved" and not successful.

To recapitulate; adding together Surgeon-Lieutenant-Colonel Freyer's cases and those admitted into the hospitals at Hyderabad, Scind, and Indore, Central India, we get a total of 3757 cases of stone in the bladder in patients of all ages and of both sexes. Amongst this number there were 94 females, 88 of whom were treated by litholapaxy, with a successful result in 87 cases. Brigade-Surgeon-Lieutenant-Colonel Forbes Keith treated all his female stone cases, 57 in number, by litholapaxy and lost only one patient. Surgeon-Lieutenant-Colonel Freyer treated 13 female patients out of a total of 17 by litholapaxy, and in no case did he perform a suprapubic lithotomy on a female. A glance at Table I. should convince the most sceptical that litholapaxy is capable of dealing most successfully with large stones in young girls and women, but judging from much that has been written about litholapaxy in boys I am quite prepared to see it gravely stated that litholapaxy should be adopted only in cases of small calculi occurring in girls, and that when the stone is of considerable size it should be removed by a suprapubic lithotomy. Such is certainly not my opinion. I think that in these days of aseptic surgery a vaginal lithotomy in an adult female will offer quite as good a chance of success as a suprapubic lithotomy. The clean incision made by a scalpel is readily stitched together, and if the vagina be rendered aseptic by filling it with iodoform gauze and a soft catheter be tied in the bladder perfect union should take place in four or five days. But the perfection of treatment for the vast majority of calculi in girls and women is unquestionably litholapaxy, and it is the ideal to which we should aspire if we are to obtain the maximum of success. For those who are being continually afforded opportunities of crushing stones in boys and men the operation of litholapaxy in girls and women is an extremely facile one. The route to the bladder in females is short and straight; there is no hypertrophied prostate to bar the way of the lithotrite into the bladder nor a post-prostatic pouch, that bugbear to successful litholapaxy in males, to be dealt with, and pouched bladders must be rare indeed in females. The instruments employed are the same as we use in boys and men, and as cases of stone are so rare in girls and women it would scarcely be worth while to fit oneself out with a supply of short evacuating cannulæ. I have always employed the same instruments in girls and women as I use in boys and men, and have found them in every way satisfactory. In some cases where girls and women strain very violently during the operation the bladder soon becomes empty of fluid, and then it will be a wise precaution to withdraw the lithotrite and inject some more water. Much aid will be given to the operator if his assistant presses the urethra against the lithotrite and cannula while they are being employed. The general surgeon in Europe is afforded but few opportunities of learning how to use a lithotrite with precision and with safety to his patient. This is his misfortune and not his fault. Bearing in mind the superiority of litholapaxy to all other methods of extracting a stone from the female bladder he will, I think, be acting wisely if he entrusts the few cases of calculi in females which he may meet with to one skilled in the use of the lithotrite.

Cresswell-gardens.

(To be continued.)

TREATMENT OF

A CASE OF ADULT HYDROCEPHALUS BY SUPRA-TENTORIAL AND SUB-TENTORIAL OPERATIONS.

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WHEN we recommend trephining for the relief of intracranial pressure it cannot be a matter of indifference whether the opening be above or below the tentorium, even when we do not aim at the removal of the cause. When the cause is situated below the tentorium this is especially obvious because the sub-tentorial space is so small compared to the general cranial cavity, its walls and roof are so unyielding, its outlets above and below so narrow, and a portion of its contents so vitally important and so sensitive to compression.

Adult internal hydrocephalus, apart from acute meningitis, is almost always due to sub-tentorial tumour, and is, indeed, a very common consequence of such a tumour. The tumour causes the hydrocephalus either (*a*) by compressing the veins of Galen; (*b*) compressing the outlet from the lateral ventricles; or (*c*) compressing both. There is a certain number of cases where, at the necropsy, the mechanism has seemed uncertain, but one of the above appears in most instances to be the correct explanation. From this it follows that in order permanently to remove the hydrocephalus in a case of tumour (at all events, in most instances) the tumour must (1) be removed, (2) subside, "be absorbed," or (3) become arrested at the same time that relief is afforded by some means to the compression already set up before arrest occurred.

1. *Removal.*—In the first case the opening would naturally be made below the tentorium. But such cases are few, because at present there are few sub-tentorial tumours which admit of removal. Some are undiscoverable from lack of exact localising data, and cerebellar tumours are very apt to belong to this class; some are inaccessible on account of their remoteness from the trephine hole; some are untouchable because either of their position amongst vital structures, their extent, their nature, their attachments, or their complications. The statistics show this. Dr. Hale White's series of 100 brain tumours[1] include 41 in which there was a sub-tentorial growth, 27 in the cerebellum, 2 in the cerebellum and pons, 6 in the pons, 1 in the pons and medulla, 1 in the medulla, and 4 growing from the dura mater. Of these 41 Dr. Hale White considered that 6 cerebellar tumours and 1 growing from the dura mater could probably have been removed. That is about 17·5 per cent., a percentage which seems to contrast very favourably with his estimate for the whole brain—viz., 10, or at most 14, per cent. There is, however, a further consideration on which Dr. Hale White lays emphasis. How many of these were discoverable? Cerebellar growths, which form the majority of those removeable, are apt to be latent or to give little more than so-called "general symptoms"—e.g., headache, vomiting, and optic neuritis. But the optic neuritis in cerebellar cases is remarkably constant,[2] more so, perhaps, than in tumours of any other part of the brain, usually early and often obtrusive, because loss of sight is often an early event. If, therefore, optic neuritis were absent I cannot but think that we should hesitate to trephine for the removal of a supposed cerebellar growth unless we had other very pronounced evidence of its existence. Now in 123 (81) of Dr. Hale White's series there was no optic neuritis, and therefore probably one would not have operated, although from the strictly pathological point of view it was to be regarded as removeable. Again in 36 (77) it is stated that the cerebral symptoms were masked by those of pyæmia, so that we can scarcely consider it. Omitting these two cases we have only 5 left which we can say were both diagnosable and removeable—i.e., 12·5 per cent. But how many of these

[1] Guy's Hospital Reports, vol. xliii., 1885, p. 117.

[2] Edmunds and Lawford: Transactions of the Ophthalmological Society, vol. iv., 1884, p. 172.

could have been so exactly localised as to be discovered at the operation? On this point the notes of the cases did not allow Dr. Hale White to come to any conclusion. Dr. Allen Starr[3] lays special stress on the difficulty of diagnosing cerebellar tumours unless they actually present at the posterior surface. Of 16 cases operated on in 9 the tumour was not found, in 2 it was found and could not be removed, and in 2 it was removed and the patient died. In 3 only—i.e., in 19 per cent.—was its removal a success. We cannot, of course, apply this percentage to the percentage deduced from post-mortem observation, but at least it suggests that the 12·5 per cent. of diagnosable and removeable tumours would be greatly reduced by the number which would be undiscoverable at the operation. We have, therefore, to consider what can be done in the great majority of cases when no removal can be hoped for.

2. *Subsidence.*—We may secure the subsidence of the tumour. Whether this ever applies to any tumour except a gumma is doubtful, but in any case subsidence requires time, and when symptoms are severe time cannot be afforded. Sudden death may intervene and is far from uncommon. It is, indeed, rather startling to note that out of 7 cases which Dr. Hale White considered removeable 3 died suddenly. Sight may be lost while we are waiting, and the combination of optic neuritis due to tumour and compression of the chiasma due to hydrocephalus is apt sometimes to act rapidly. Lastly, it is conceivable that the cortex may suffer from long-continued pressure. What can we do in the meantime? Two operations are open to us: we may trephine above the tentorium and tap or even drain the lateral ventricles (bearing in mind the two main risks of sepsis and over-quick escape of fluid) or we may trephine below the tentorium and allow the sub-arachnoid space to empty itself. All we want is temporary relief and either may afford it.

3. *Arrest.*—But few cerebellar tumours are syphilitic, and cerebellar tumours form the majority of sub-tentorial tumours, therefore presumably this majority will not subside under iodide and mercury or otherwise. We can then only hope for arrest, and fortunately arrest is not very rare, especially in the case of tuberculous masses. But we must manage more than a mere arrest of the growth, for there is pressure already set up and we have to relieve it, and relieve it permanently. For this purpose a supra-tentorial opening will not do, since tapping the lateral ventricles is plainly out of place, and permanent drainage is too dangerous to be thought of. But another possibility presents itself. May not an opening made below the tentorium effect what we require? It will certainly relieve the general sub-tentorial pressure and even when skin and muscle are closed over it it will continue to give additional space. By thus relieving the general pressure, may we not fairly expect it also to relieve the local pressure on the veins of Galen or the outlet from the lateral ventricles? If so, the cause of the hydrocephalus should disappear and the hydrocephalus disappear with it. In the following case the conclusion that something of this sort has occurred can scarcely be escaped.

The patient, a rather strumous-looking girl aged seventeen years, was admitted to the Devon and Exeter Hospital on Dec. 28th, 1894, with complete blindness, well-marked double optic neuritis, headache, and a history of vomiting. She was not anæmic, had no symptom of plumbism, and her urine was normal. She gave the following history, which her mother confirmed. Up to the preceding March she had been perfectly well, but about that time she noticed that when out walking in the dusk a dark shadow would suddenly come over her sight, and "for one or two minutes" she could not see. At first this was very occasional, but gradually it became more frequent, occurring several times in the same evening, and the loss of sight became longer, "three or four minutes at a time." Later (she was very indefinite about her dates) this began to occur in the daytime as well, and soon looking at any bright light would take away her sight for several minutes. In the intervals vision was becoming progressively worse. She had always been subject to "bilious attacks" of headache and vomiting, but since March these had become more frequent—about once a fortnight, usually in the morning, and accompanied by vertigo. On Nov. 5th, 1894, she went to the West of England Eye Infirmary, being then almost blind. Pronounced double optic neuritis was found and the following note was made: "Vision of the right eye, shadows; of the left, $\frac{1}{60}$. She has had for the past week shaking attacks all down the right side, occasionally only the arm being affected. These attacks came on on alternate days and she was sick the whole day. The attacks did not begin in any particular spot and she did not lose consciousness. There is constant headache, most acute over the left ear; no tenderness of head discoverable, no paralysis of motion or sensation." She was put on a mixture of bromide and iodide of potash, and for a time the headache and sickness disappeared, nor were there any more "shaking" attacks. On Christmas night she was awakened by intense headache all over her head, with violent vomiting and "shaking" all over, with great tenderness of the skull. She was admitted to the Devon and Exeter Hospital on the 28th. As regards past illnesses, she had had none lately. She had had scarlet fever as a child, but it left no sequelæ. She had never had a blow on the head or any discharge from, or pain in, either ear and had never been deaf. Her father and mother were both alive and well, aged forty-six and forty-four years respectively. A brother and sister (twins) died in infancy from convulsions. Her mother's sister died from what appears to have been phthisis. There was no evidence of syphilis. The patient was a fairly-nourished but somewhat strumous-looking girl with a drowsy expression. She was absolutely blind and could not tell where the windows were. Her speech was clear but deliberate; her answers were quite intelligent but delayed, and then commencing rather suddenly in an unnecessarily loud tone. Her memory seemed to be unaffected. She walked easily and well when guided. There was slight headache on the left side of the head between the ear and the occiput; there were no sickness and no giddiness and the patient slept and ate well. She was given thirty grains of iodide three times a day with small doses of mercury. There was a very slight tremor of the right arm, which movement did not increase. No paralysis of motion or sensation was present. The right knee-jerk was greatly diminished, the left being normal. The condition of the cranial nerves was as follows: 1. There was complete bilateral anosmia (practically no coryza was produced by the iodide). 2. Absolute blindness existed for the last week. 3, 4, and 6. The pupils were equal, but sluggish in reacting to light. No strabismus or nystagmus was present, but both lateral conjugate movements of the eyes seemed feeble. 8. Normal. 5, 7, 9, 10, 11, and 12. Normal. The heart, lungs, and abdomen were natural and the temperature was normal. The optic neuritis was very intense and the swollen papillæ were rather pale. The diagnosis was intra-cranial tumour. The early blindness, occipital headache, early and sometimes severe vomiting and vertigo, with absence of motor or sensory paralysis (anosmia and sluggish lateral movements of the eyes excepted), favoured the suggestion that it was cerebellar. The "shaking attacks" in the arm and the persistent slight tremor in it, taken with the sluggish ocular movements, might have raised a suspicion of its being pontine, but pressure on the pons from above might, it was thought, explain these. The drowsiness, slow speech, and delayed answers, with the early blindness, were regarded as suggesting distension of the lateral ventricles. Putting everything together it was considered that the tumour was certainly sub-tentorial and probably in the fore and under part of the cerebellum. As iodide and mercury were evidently useless and it was possible that operation might in some measure restore the sight and relieve the headache it was decided to trephine. It did not then occur to me that trephining could prove to be more than a palliative measure and therefore the position of the opening seemed immaterial.

Operation 1. Supra-tentorial.—Accordingly, on Jan. 1st, 1895, my colleague, Mr. Bankart, trephined. The centre of an inch trephine was placed on a line drawn vertically from the external auditory meatus at a point about four and a half inches above the external meatus and three inches from the antero-posterior mid-line of the skull. The dura mater bulged and scarcely any, if any, pulsation could be perceived, and on incising it the brain bulged out so forcibly that to prevent an immediate and considerable hernia it was necessary to push a small trocar and cannula into the ventricle. About six drachms of clear, slightly albuminous fluid were drawn off. The brain bulged less and pulsation could be seen in it. The flaps were replaced and sutured. The patient rallied well and the wound did admirably. On the 3rd some slight amnesia was noticed, and this was more marked next day, when some slight weakness was observed in the right side of the mouth and the right side

[3] Starr: Brain Surgery, p. 216.

of the tongue. These symptoms were considered to be due to the position of the opening and soon disappeared, so that on the 7th they were noted to be gone. The temperature had remained normal since the operation and the headache had completely left her. There was also no further vomiting or vertigo. The sight, however, had not returned and did not do so subsequently. Other symptoms now began to make their appearance. The speech became blurred and sibilant as if she was speaking with her mouth full of saliva; slight divergent squint was observed, apparently from weakness of the internal recti, and there was some nystagmus on looking towards the right. On the 8th there was slight proptosis, more marked on the right side, and slight nystagmus on looking either right or left. She was drowsy, with a furred tongue and offensive breath. There was defective sensation to touch over the lower part of the face on the right side, complete loss of sense of touch all over the right arm (the sense of pain was retained), and allochiria over the left arm; on the legs and trunk there was patchy anæsthesia. The right leg felt "sleepy and tingling." On the 9th some weakness was noticed in the right hand, and next day the right hand became absolutely palsied. Both knee-jerks were completely lost. There was no weakness of either leg. On the 11th the hand began to recover power, but there was slight ptosis noted on the left side. On the 14th, although there was no weakness of legs, she could not stand on attempting to do so (for the first time since the operation), as there was marked incoördination, the legs being thrown wildly about. On the 17th the left pupil was noticed to be larger than the right, the right reacted slightly to light, but the left not at all. The relative size of the pupils after this date was somewhat variable, but when unequal the left was always the larger. On the 20th the hernia cerebri, which had been steadily increasing, had become so large that it was feared the skin over it might give way, and therefore an exploring needle was pushed through it into the ventricle and eleven drachms of fluid drawn off. On the 26th the patient was very drowsy and said her right leg felt sleepy and tingling again. Next day she complained of severe pain in the right side of the abdomen, which was extremely hyperæsthetic. Her temperature rose to 103·2° F. with a slight rigor, and the right arm and leg became flaccid and powerless. With this the right knee-jerk, which, like the left, had been completely abolished, returned and became excessive with ankle clonus, the left knee-jerk remaining absent. On the 30th she was very irritable and lay curled up on her right side. There was some occasional retraction of both sides of the mouth. On Feb. 3rd she was almost unconscious, scarcely recognised her mother's voice, and passed her motions under her. The temperature had again become normal. From this date she improved, the hyperæsthesia and irritability passing off and some return of power showing itself in the arm and leg (not in the hand). But the hernia was again increasing and drowsiness became very marked. At last, on Feb. 12th, this almost amounted to unconsciousness; she evinced no interest in her surroundings and seemed steadily passing into coma. So serious did her condition appear that it was thought admissible to run the risk of draining the ventricle and a small hydrocele trocar and cannula were again passed in through the hernia. Before withdrawing the cannula a very small (No. 1) catheter was pushed in and afterwards tied in place, large dressings being applied over it. A great quantity of fluid drained away, the catheter being kept in for three days. The effect of this drainage was unmistakeable. Improvement at once set in, and on Feb. 18th a note was made that "she is much better, lies straight in bed, and is bright and cheerful." Her movements became brisk again and the drowsiness vanished. After the catheter was removed the drainage did not cease, but merely lessened, the fluid continuing to escape apparently along the track the catheter had left. On Feb. 25th the "hernia less tense, greatly better." The drainage now ceased, and with its cessation drowsiness began to return, so that on Feb. 28th "she is very drowsy again; no drainage." On March 1st free drainage through the hernia re-commenced spontaneously and went on intermittently for a fortnight, one or two days at a time with intervals of two or three days. With this the drowsiness again disappeared and remained absent, and she began to regain the flesh which she had lost. On March 11th it was noted that there was some weakness of the conjugate lateral movement of both eyes towards the right. Then came a week during which there was no drainage and drowsiness again became very marked. It now occurred to me that a sub-tentorial opening might have the effect referred to above, and accordingly on March 21st (Mr. Bankart being away) my colleague Mr. Harris operated.

Operation 2. Sub-tentorial.—After raising the soft parts a three-quarter inch trephine-hole was made over the left cerebellar hemisphere which bulged considerably. It was thought possible that the tumour might be cystic, and so a small trocar was passed in two directions forwards, inwards and upwards, but no fluid was found. The flap was replaced and sutured; the patient rallied well and the wound did excellently. Without giving detailed notes it will be sufficient to say that since this second operation there has never been the slightest return of drowsiness. An attack of headache and vomiting occurred about four months ago which rapidly subsided under iodide and mercury, but no drowsiness accompanied it.

On Dec. 14th I saw the girl at her home. She was perfectly intelligent, cheerful, and happy; she showed no trace of drowsiness, her answers were not delayed, and she only occasionally hesitated for a word. There had been no return of drainage through the hernia, and the hernia was greatly reduced in size and quite flaccid. This reduction was no doubt largely owing to a gentle continuous pressure applied by Mr. Harris. There was a considerable but soft bulging over the sub-tentorial trephine-hole. Smell was absent, but taste was present (said to be variable). Sight remained absent and the discs were white and filled in, but without much change in the calibre of the vessels. The conjugate movement of both eyes was to the left (it used to be to the right), was weak, and there was some nystagmus in all directions. The pupils were large and equal, reacting slightly to light. There was no proptosis. Sensation to touch was normal on the face. There was very slight weakness of the right side of the mouth and the tongue deviated slightly to the light. Her right hand was powerless, but she could move the arm fairly. Both legs were very weak and she could not stand, but there did not seem to be much difference between them except that flexion of the ankle was weaker on the right than on the left. Sensation was lost on the right leg from the foot to slightly above the knee and on the right hand and half way up the forearm. The plantar reflexes were normal, the left knee-jerk was lost, and the right exaggerated, and there was ankle clonus on the right side. The sphincters were normal. She had no pain of any kind and no sickness, had an abnormally good appetite, and had decidedly gained flesh. The growth seems to have been arrested. Whether the arrest is permanent remains to be seen. If it was, as I was inclined to think, tuberculous tubercle might show itself sooner or later in the lungs. She had an occasional slight dry cough, but no physical signs in the chest.

I have given the case practically in full, and it will be obvious that the position of the first trephining by its effects greatly confused the symptoms; but the following points seem clear, and it is to these I wish to draw attention: (1) the case was clearly one of intra-cranial tumour; (2) it was also clearly, I consider, one of sub-tentorial tumour; (3) internal hydrocephalus was marked and increasing; (4) a supra-tentorial trephining was a means of gaining time; and (5) a sub-tentorial trephining appeared to remove the hydrocephalus permanently. I am glad of this opportunity of expressing my great indebtedness to my colleagues, Mr. Bankart and Mr. Harris, for so kindly undertaking the surgery of the case, and also to the house surgeon, Mr. Andrew, for the skill and care he bestowed on the after treatment.

Exeter.

THE GROSVENOR HOSPITAL FOR WOMEN AND CHILDREN.—This hospital, designed by Messrs. Roumieu and Aitchison, honorary architects, now being erected at the south corner of Vincent-square, Westminster (the foundation stone of which was laid by Lady Kortright in July last, who has been a munificent donor to the building fund), is to be constructed upon the latest lines of efficiency. The materials are red brick and red terra-cotta, the style of architecture aimed at being that of Free North Italian Gothic. It is expected that the Princess Louise will open the hospital next season. The cost of the building is nearly £9000, exclusive of the out-patients' department lately erected at a cost of £3000.

ON RE-DUPLICATION OF THE SECOND SOUND.

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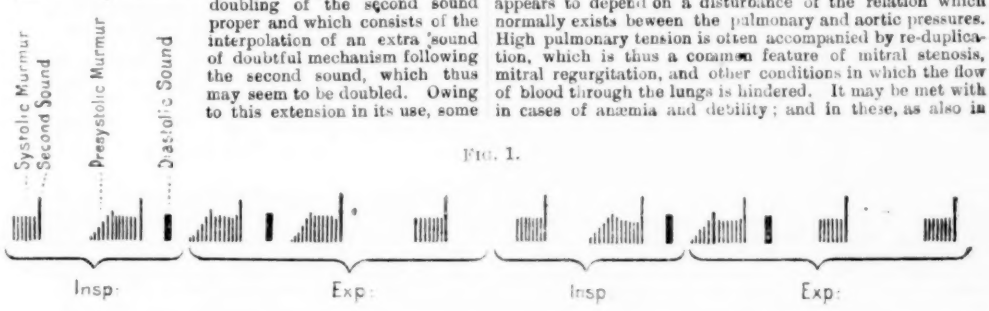
THE closure of the semilunar valves is associated with a sound which under ordinary conditions is single. Under special circumstances the sound becomes divided into two parts and is described as re-duplicated. The term "re-duplication of the second sound" has, however, been extended to denote a phenomenon which is quite distinct from doubling of the second sound proper and which consists of the interpolation of an extra sound of doubtful mechanism following the second sound, which thus may seem to be doubled. Owing to this extension in its use, some ambiguity has arisen in regard to the significance of the term, an ambiguity which may best be avoided by employing it only in its strict meaning—i.e., when an actual doubling of the second sound exists. It is a matter of importance to differentiate the genuine from the spurious forms of re-duplication, and in the course of this communication an attempt will be made to indicate briefly how this distinction can be drawn. In the event of the second sound appearing to be doubled the following points should be ascertained: (1) The area over which the double sound is audible as such, and of this area the special point at which the double nature of the sound is most distinct; (2) the rhythm of the double sound, whether one part follows the other in the closest proximity, or leisurely after an appreciable interval; and (3) the quality of the two sounds, whether they are alike (each one resembling the normal second sound), or one only with the special character of the second sound, the other notably differing.

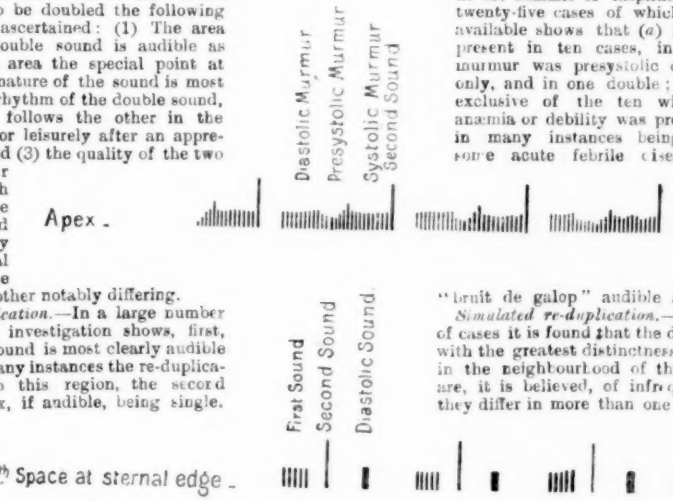
FIG. 1.



Genuine re-duplication.—In a large number of cases such an investigation shows, first, that the doubled sound is most clearly audible at the base. In many instances the re-duplication is limited to this region, the second sound at the apex, if audible, being single. In other cases, but less commonly, a double sound is heard at both apex and base, but with much more distinctness at the base than at the apex. Secondly, the two elements of the double sound are in close proximity, the interval by which they are separated being exceedingly short. Thirdly, the two elements, although they may differ in loudness, in other respects are similar, both possessing the special qualities by which the normal second sound is characterised. Re-duplication which conforms to the above description in every respect of distribution, rhythm, and quality is of frequent occurrence, and it is difficult to regard such cases in any other way than as examples of true doubling of the second sound, in all probability produced by the asynchronous closure of the pulmonary and aortic valves. The clearness with which the double sound is heard at a spot where presumably both aortic and pulmonary elements share in the composition of the second sound is in accordance with this view, which is further favoured by the similarity of the two parts of the double sound, and by the shortness of the interval by which they are separated. The re-duplication is often still more limited than has been indicated; it is frequently audible only to the left of the sternum, the second sound as heard to the right of this bone being single, or only indistinctly doubled. From this it would appear, as has been pointed out elsewhere,[1] that the pulmonary element of the second sound is singularly circumscribed in its conduction, as compared with the sound of aortic origin.

The circumstances under which a genuine re-duplication of the second sound may be produced are numerous. It appears to depend on a disturbance of the relation which normally exists beween the pulmonary and aortic pressures. High pulmonary tension is often accompanied by re-duplication, which is thus a common feature of mitral stenosis, mitral regurgitation, and other conditions in which the flow of blood through the lungs is hindered. It may be met with in cases of anæmia and debility; and in these, as also in cases of mitral disease, there is present in addition to the re-duplication, an accentuation of the second sound as heard to the left of the sternum. Re-duplication is by no means so commonly associated with high systemic pressure; it is occasionally heard, however, in cases of chronic interstitial nephritis, with hypertropied and strongly acting left ventricle. In many healthy persons it is produced when a deep breath is taken and held at the summit of inspiration. An analysis of twenty-five cases of which detailed notes are available shows that (*a*) mitral murmurs were present in ten cases, in five of which the murmur was presystolic only, in four systolic only, and in one double; (*b*) in twelve cases, exclusive of the ten with mitral murmurs, anæmia or debility was present, the individuals in many instances being convalescent from some acute febrile disease; (*c*) two were cases of acute lobar pneumonia; and (*d*) in one case there was hypertrophy of the heart, with high-tension pulse and "bruit de galop" audible at the apex.

FIG. 2.



Simulated re-duplication.—In a certain number of cases it is found that the double sound is heard with the greatest distinctness, not at the base, but in the neighbourhood of the apex. These cases are, it is believed, of infrequent occurrence and they differ in more than one respect from the re-duplicated second sound just now described. If the stethoscope be placed at the second left intercostal space, close to the sternal edge, a single second sound is heard. As the stethoscope is shifted downwards in the direction of the apex another sound becomes added to the normal second sound, occurring subsequently to it and after a definite interval. The quality of this interpolated sound varies; it is usually short and abrupt, but can be clearly distinguished in some respect of pitch or timbre from the second sound which precedes it. It is limited in distribution, being distinctly audible only in the neighbourhood of the apex-beat—as a rule between this point and the left border of the

[1] The Clinical Significance of Accentuated Second Sound and Pleur. By Ringer THE LANCET, Sept. 29th, 1894.

sternum, in the fifth or fourth interspace. Whatever be the mechanism by which such a double sound is produced, it can hardly be attributed to the asynchronous closure of the pulmonary and aortic semilunar valves: its area of audibility, the length of the interval which separates the two elements, and the dissimilarity of these elements are all opposed to such a view. The phenomenon cannot be regarded as a true re-duplication of the second sound; it differs, in its clinical features so widely from this that it can hardly be described as simulating genuine re-duplication very closely. By its position in the earlier part of diastole the abnormal sound may readily be distinguished from that which constitutes the "bruit de galop," and which in cases of interstitial nephritis with hypertrophied heart may give rise to an apparent doubling of the first sound. The rhythm indeed produced by the sequence of first sound, second sound, and early diastolic sound resembles more closely that of a canter than of a galop. It has been compared with a dactyl – ∪ ∪; but it may be more accurately indicated in musical notation, thus, a crotchet, two quavers, and a crotchet rest, the crotchet representing the first sound, the two quavers the second and interpolated sounds, and the crotchet rest standing for the pause before the cycle recommences. The two following cases are of interest in connexion with this subject.

CASE 1.—The patient was a man aged thirty-six years, who gave no history of rheumatism, but in the course of his life had been subjected to severe strain. He was very anæmic. The pulse was 80, small, and compressible, but regular. The apex beat was located in the fifth interspace in the nipple line. The impulse was weak; no thrill was felt. With the stethoscope a systolic murmur was heard at the apex, followed by the second sound; these two were constant. In addition two further signs were frequently audible, a presystolic murmur preceding and running up to the systolic murmur, and a short valvular sound in diastole, of a quality quite distinct from that of the second sound and dividing the interval between the second sound and the presystolic murmur into two approximately equal parts. On taking note of the relation of the respiratory movements to the presystolic murmur and the diastolic sound it was found that the murmur and sound were produced only during the later part of inspiration and the earlier part of expiration; they were thus heard in two or three beats of every five. These facts may be rendered clearer by a diagram. (See Fig. 1.) The diastolic sound was audible at the apex and between this point and the sternal margin in the fourth and fifth interspaces, but no higher than the fourth interspace. Although with none of the qualities of murmur it was not so sharp and clearly defined as the second sound which preceded it.

CASE 2.—This patient was a man aged fifty years. There was a history of more than one attack of rheumatic fever. The pulse was 40, regular, of slow rise, long duration, and gradual fall. The apex beat was in the fifth space, immediately to the left of the nipple line; the impulse was localised and heaving. A thrill, of presystolic rhythm, was felt in the region of the apex, at times continued into the early part of systole. Over the same area there was heard a presystolic murmur, running up to a long soft systolic murmur, which was terminated by the second sound; this was followed by a pause, but of short duration only, since the greater part of diastole was occupied by a long drawn-out murmur continuous with the rough presystolic reinforcement alluded to above. The auscultatory signs were specially easy to study by reason of the infrequency of the heart-beat. On shifting the stethoscope along the fifth interspace as far as the sternal margin the signs were materially altered. No murmur was audible at this spot. The first and second sounds were heard and, following these in the first half of diastole, a sound of short abrupt quality, not a murmur, yet quite unlike the second sound. (See Fig. 2.) The abnormal diastolic sound was plainly audible in both fifth and fourth interspaces close to the sternal edge, less distinctly in the third, and very indistinctly in the second interspace, where it was preceded by a loud accentuated second sound, very much louder than over the fifth interspace.

An interpolated sound similar to that which forms the chief point of interest in the above cases has been noticed by several observers, most of whom insist on its connexion with mitral stenosis. It is probably that described by Bouillaud[2] as the "bruit de rappel"; he compared it in rhythm to "the noise of the hammer which, after striking the iron, falls on the anvil, rebounds, and falls again motionless." Sansom drew attention to the sign in association with mitral narrowing in 1880[3] and more recently[4] he has stated that it is to be found in at least one of every three cases of mitral stenosis; he regards it as especially a sign of the earlier periods of the history of the disease. It is also described by Potain[5] under the name of "claquement d'ouverture" of the mitral valve; he believed it to be evidence of a somewhat advanced degree of mitral stenosis, but short of great rigidity of the mitral valve.

It is not intended to discuss the mechanism of this abnormal sound. An endeavour has been made to indicate the features by which it may be distinguished from a true re-duplication of the second sound, and it is urged that, by whatever name it be designated, one be chosen which is descriptive of the phenomenon and may serve for its clinical recognition, without involving any unproved theory as to its mode of production, concerning which our knowledge is at present so deficient.

Welbeck-street, W.

[2] Traité Clinique des Maladies du Cœur, second edition, 1841, vol. i., p. 213.

[3] Proceedings of the Medical Society of London, vol. v., 1881, p. 191.

[4] The Diagnosis of Diseases of the Heart and Thoracic Aorta, 1892, p. 217.

[5] Clinique Médicale de la Charité, 1894, p. 36.

NOTE ON THE SMEGMA BACILLUS: ITS DIAGNOSTIC IMPORTANCE AND ITS CULTIVATION.

BY ALBERT S. GRÜNBAUM, M.A., M.B. CANTAB, M.R.C.P. LOND.

(FROM THE CLINIC NOTHNAGEL, VIENNA, JUNE, 1896).

THE smegma bacillus was discovered in 1885 by Matterstock,[6] and by Alvarez and Tavel,[7] independently. During the succeeding three years a large number of papers was written on the relations of the bacilli of smegma, of syphilis, and of tubercle, but since then the subject has been comparatively neglected. Although even at that time some writers indicated the possibility of its occurrence in the urine, and of its being mistaken for the tubercle bacillus, a possibility emphasised by Lustgarten and Mannaberg[8] when they found the smegma bacillus to be a normal inhabitant of the male urethra, the question does not seem to have been systematically examined[9] or thoroughly appreciated by most text-books on clinical diagnosis or on the examination of the urine, especially in this country. That the smegma bacillus frequently occurs in the urine, especially of females, had been known for some time in the Clinic Nothnagel when, at Dr. Mannaberg's suggestion, I undertook to determine the actual frequency and attempt the cultivation of the bacillus. Whilst my work was in progress a discussion in the Berlin Verein für Innere Medicin[10] showed that, although many clinical observers were aware of the facts, they considered them insufficiently well known, so that I have the less hesitation in partially repeating the observations there made.

Fifty specimens of urine from forty-seven individuals affected with various diseases (some with cystitis) were examined, ten from males and forty from females. The specimen was centrifugalised, the deposit spread on a coverglass and stained in the usual way for tubercle bacilli with the Ziehl-Neelsen and Gabbett solutions. No smegma bacilli were found in any of the specimens obtained from males, but they have occasionally been found by other observers. Of the other specimens eleven were obtained by catheter; in none of these were any bacilli found. In the remaining twenty-nine specimens obtained in the ordinary way bacilli were found in seventeen; in the remaining twelve none were detected.

In the above numbers are included eight specimens obtained in the following way. A portion of urine was first

[6] Mittheilungen aus der Medicinischen Klinik der Universität Würzburg, Band ii., p. 367.

[7] Alvarez et Tavel: Archives de Physiologie Normale et Pathologique, 1885, vol. vi., p. 303.

[8] Lustgarten und Mannaberg: Vierteljahrschrift für Dermatologie und Syphilis, 1887, p. 905.

[9] Except, perhaps, by Lésnik and Mayzel, in the practically inaccessible Gazeta Lekarska, 1891, No. 36. The abstracts give no information.

[10] Berliner Klinische Wochenschrift, 1896, p. 372.

passed in the normal manner and the remainder then withdrawn by catheter. In the case of two patients no smegma bacilli were found in either portion; in that of the other two the urine passed in the normal manner contained them, whilst the portions obtained by catheter did not.

From these numbers it would appear that the smegma bacillus is to be found but rarely in the urine of males (in spite of its presence in the urethra) and in about 59 per cent. of females (in whose urethra I was unable to demonstrate the presence of the bacillus in six specimens examined). This percentage is probably rather too low, since some of the urines, by the kindness of Professor Schauta and his assistant Dr. Wertheim, were obtained from the gynæcological outpatient room, where patients have usually washed the external genitals before presenting themselves for examination.

In tabular form the results are as follows:—

	Normal.		Catheter.	
	Found.	Not found.	Found.	Not found.
Males	—	10	—	—
Females	15	10	—	7
(Separate portions from four patients)	2	2	—	4

For purposes of diagnosis various colouring methods have been proposed and recommended by various observers, most recently of all by Grethe,[11] who recommends the use of alcoholic methylene-blue solution for decolourisation instead of an acid solution. It appears to me that erroneous results are obtained by considering the colour-capacity of the smegma bacilli to be the same whether in smegma or in urine, since they are much more easily decolourised in the latter; and also that it is unpractical to now recommend a new method for staining tubercle bacilli when, in England, at any rate, the Ziehl-Neelsen and Gabbett solutions are in almost general use. As a matter of fact, one minute's immersion in absolute alcohol is sufficient to decolourise the smegma bacilli in urine, but, *as a rule, careful catheterisation eliminates all sources of diagnostic error.* This had been previously shown by Lustgarten and Mannaberg to hold good for the male, and the above results indicate that it applies equally for the female. It is therefore unnecessary, except to localise disease when present, to catheterise the ureters as was done in the case upon which the discussion in the Berlin Society arose. On that occasion Leyden stated that the smegma bacillus could be found in nearly every urine and that it never showed the irregularities of the tubercle bacillus. I was not fortunate, or, perhaps, not industrious enough to confirm the first statement by very thoroughly examining two cover-glass specimens in each case where no bacilli were found. The second statement is certainly not absolutely correct, for irregular specimens of the smegma bacillus exactly resembling the tubercle bacillus are to be found. As a rule, however, the former have a regular contour and more angular extremities than the latter, and, as has been frequently pointed out, occur in small groups or on shed epithelial cells. So that, all points taken into consideration—viz., their shape and grouping, their easy decolourisation by alcohol, and, principally, their absence in the urine obtained by catheter—the distinction does not present insuperable difficulties.

So far as I am aware no bacillus which gives the colour reactions of the tubercle bacillus has hitherto been cultivated from smegma. After trying many culture media I succeeded in growing in milk (but not in obtaining a pure culture) a bacillus which stained red with carbol-fuchsin, and was not decolourised in two minutes by Gabbett's solution. Although it may be that the fat in the culture medium assists the growth and composition I do not think that it causes the colour reaction, as suggested for other bacilli by Bienstock[12] and Gottstein,[13] because the other cocci and bacilli (one of which, a short, slender bacillus, easily isolated on gelatin, causing coagulation of milk, and constantly present) do not retain the red stain. Some effect may be due to the culture medium, since a bacillus, resembling that of smegma, which grows on agar serum, gives the colour reaction partially. This side issue is the more interesting since latterly tubercle bacilli (dried) have been found to contain 37 per cent. fat. In milk the bacillus assumes the short, rather plump form found in the smegma of the male, as compared with the rather more slender form found generally in the smegma of the female. Unfortunately, cultivation cannot be used for diagnostic purposes, since it will not grow from every urine in which it is present.

Vienna, June, 1896.

[11] Grethe, Fortschritte der Medicin, p. 328, 1896.
[12] Bienstock, ibid, 1886, p. 193.
[13] Gottstein, ibid, 1886, p. 249.

CEREBELLAR ABSCESS FOLLOWING MASTOID DISEASE; DEATH; NECROPSY.

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INTRA-CRANIAL lesions the result of ear disease are of such marked interest owing to the important progress surgery has made in this direction, more especially with regard to cerebellar abscess, that any additional case in which this lesion has existed must necessarily be of considerable interest, for, so far as I am aware, the recorded cases are not numerous.

A schoolboy, fourteen years of age, had suffered from a discharge from the right ear for seven years, the result of acute otitis media during an attack of measles. About four years previously to his being seen by me the discharge ceased; he then had severe earache for some days, which got well without any treatment; beyond this he had had no trouble till the present attack, which started with the usual history given—cold, then cessation of the discharge. He had been confined to bed for a week suffering from severe earache together with the invariable concomitant symptoms which generally attend sudden stoppage of a discharge in this region, whether set up by a catarrh, polypus, granulations, or inspissated pus. As he was daily getting worse I saw him first on Jan. 7th, 1896. He looked very ill and was evidently in great pain; the face had a worn and anxious expression; the temperature was 105° F., and the pulse 125; the tongue was covered with a thick brown fur, the breath being most offensive; there was a cough, with bronchial catarrh of both lungs. He complained of acute pain in the mastoid region, radiating down the neck and towards the frontal, parietal, and occipital regions, severe headache, anorexia, retching, and insomnia, with a certain amount of delirium at night. There was marked tenderness over the jugular vessels; no redness or œdema over the mastoid presented, but slight pressure caused intense agony. Otoscopic examination of the right ear showed the external meatus free, with flakes of green pus adhering to the walls, the membrana with the malleus and incus were absent, and the tympanic cavity was clear and not inflamed. The left ear was normal. There was no photophobia, optic neuritis, or paralysis of any nerves present. He was quite conscious. To save reiteration I may here state that at no time was there any evidence of photophobia, optic neuritis, inequality or sluggish action of the pupils, or paralysis of any cranial nerves present, although repeated and careful examination was made upon numerous occasions throughout the illness. The diagnosis was acute inflammatory suppuration of the mastoid cells due to blocking of the exit from the antral cavity and possibly starting sinus thrombosis. The extreme gravity of the case and danger to life, with the benefits to be gained by the recognised surgical procedure of the day, were laid before the parents, but they refused to give consent to any operation, seeing that he had got well in the former attack without such being necessary. This being the case the line of treatment adopted was of a palliative nature and such as would relieve the most urgent symptoms—a calomel purge, quinine, and spongio-piline as hot as could be borne applied to the mastoid region hourly. Needless to say, there was no change in his condition during the first twenty-four hours. The meatus was well syringed out daily with warm antiseptic lotion. In the course of the next few days a sub-periosteal abscess appeared at the back of the right ear and above the level of the meatus. Much against the parents' wish this was opened by a free incision down to the bone, giving exit to a quantity of foul smelling green pus. Bare and roughened

bone was felt. A probe could be passed along a sinus into the antral cavity, whilst a steel director was easily pushed through the necrosed portion into the mastoid cells, giving free exit to more pus. The beneficial effect of this was kept up by linseed-meal poultices. The temperature fell to 100° and the pain abated. On Jan. 12th rigors began, followed by profuse sweating, copious diarrhœa, and vomiting. He looked very anæmic; the temperature was irregular; he was obviously much worse and in a condition of danger. These symptoms pointed strongly to, and were highly suggestive of, a pyæmic involvement of the system or that of abscess formation. The rigors varied from three to six a day and the temperature from 99° to 105°. The mother stated that she had noticed twitching on the right side of the face, but this I was never able to verify for myself. On Jan. 19th the wound behind the ear was closing up, but still discharged pus. The pain in the head was gone. He did not complain when firm pressure was made over the mastoid, digastric fossa, or jugular vessels, but he was restless, with irritability of temper and fits of depression. On Jan. 26th the vomiting, which had been of daily occurrence, was more marked and occurred several times a day. The diarrhœa ceased; the tongue was quite clean; there was a certain amount of emaciation present; the temperature was subnormal; there were no rigors; there was retraction of the abdominal walls and *tache cérébrale* was well marked. The pulse and respiration were slow. Cerebration was sluggish, the patient taking a long time to answer a question. Upon percussing the head no pain was complained of beyond that of a well-defined area over the right occipital region; here slight tapping caused great pain. On making him walk staggering gait was quite apparent, and on the patient closing his eyes there was a tendency to fall forwards; this together with the other symptoms was evidence in favour of cerebellar abscess. On Feb. 1st the incision behind the ear had quite healed; he sat up in bed, played with toys, and amused himself drawing pictures. Vomiting was still marked. The pulse was 40, the temperature sub-normal, and respiration slow but regular. There was no change in his condition till Feb. 7th, when he did not take so much notice of things and seemed difficult to rouse. He lay on his left side huddled up in bed, with the legs and thighs flexed. Constipation was present. The pulse, temperature, and respiration were as before; the vomiting was more frequent. On Feb. 12th violent paroxysms of acute pain set in over the vertex of the skull, causing him to clasp his hands over his head and scream during the attacks. Purgation and opium diminished their intensity and frequency. It was quite evident the end was slowly approaching. He was getting very emaciated. There was never any retraction of the head or Cheyne-Stokes respiration. On Feb. 22nd he sat up in bed to ask for a drink and fell back dead. The vomiting never abated and the temperature remained subnormal. After great difficulty permission was granted for a post-mortem examination of the head only.

Necropsy.—The skull cap came away easily; the dura mater was not adherent in any part; a degree of fulness was apparent as though there were increased intra-cerebral pressure; the dura mater stripped off easily, and with the exception of the veins being somewhat distended the surface of the brain looked healthy. There was no sign of meningitis, no caries of the petrous bone, a slight increase in the amount of cerebro-spinal fluid at the base, but no meningitis. The right tentorium cerebelli was seen to be distinctly bulged. On dividing it a large abscess was to be seen occupying the anterior and outer portion of the right lobe of the cerebellum evidently on the verge of bursting. The membranes were not adherent, neither was there any healthy layer of brain tissue seen to be intervening. On attempting to remove the brain the abscess burst and a quantity of offensive green pus escaped. There was a distinct limiting membrane encapsuling the abscess from the neighbouring brain tissue, but no channel of communication with the mastoid cells was to be found. There was no localised abscess beneath the dura mater covering the bone in this region; in fact, the membrane came away easily in the posterior fossa, leaving to all appearance a healthy surface. There was no thrombosis of the lateral sinus. The pons and medulla, with the remainder of the cerebellum, were healthy. On cutting into the brain the lateral ventricles were markedly distended and filled with clear fluid. Beyond this no other lesion was to be found. The mastoid cells and antrum were found to be free from pus; the incision wound was quite healed.

St. John's, Woking.

REMOVAL OF A RAPIDLY GROWING OVARIAN CYST WHICH HAD BURROWED BETWEEN THE UTERUS AND THE BLADDER

IN A PATIENT WHO HAD BEEN RECENTLY CONFINED, AND ON WHOM OVARIOTOMY HAD BEEN PERFORMED EIGHTEEN MONTHS PREVIOUSLY.

BY A. C. BUTLER-SMYTHE, F.R.C.S EDIN.,

SURGEON TO THE GROSVENOR HOSPITAL FOR WOMEN AND CHILDREN, AND SURGEON TO OUT-PATIENTS AT THE SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.

A MARRIED woman aged twenty-four years consulted Dr. Seccombe of Terrington, Norfolk, in March, 1892, on account of pains in her stomach which were at first thought to be due to flatulence. On examination a tumour was discovered which was diagnosed, in consultation with Dr. Plowright of King's Lynn, to be an ovarian cyst. The patient was sent to the Samaritan Free Hospital and was admitted under my care on April 30th, 1892. The following history was elicited from her. Menstruation first appeared at twelve years of age, and since then the periods had been regular though scanty. She had been married two and a half years, but had not become pregnant. In June, 1891, she had influenza, and in the following August very nearly succumbed to an attack of measles which left her in a delicate state of health. Her first experience of abdominal pain occurred in February, 1892, and as it became worse she sought medical advice. On admission the patient, who was much emaciated, flushed, and feverish, complained of great tenderness in her abdomen and was evidently suffering from extreme distension, the circumference at the umbilicus being forty-eight inches. Her breathing was rapid and shallow, the pulse was 120, and the temperature was 101° F. The tongue was coated; the urine was acid, of specific gravity 1015, clear, and contained no trace of albumin. The abdomen was œdematous and the vulva and thighs were swollen. Her appetite was fair, but she had been losing flesh steadily for the last few months. Of late she could not lie on her right side because of a dragging pain in her abdomen to the left of the umbilicus. The abdomen was distended by a tense swelling which fluctuated freely. There was dulness up to the ensiform cartilage and in both flanks. The tumour was adherent to the parietes. Per vaginam the uterus was found to be behind the tumour, which almost filled the pelvis. The uterine cavity measured two and a half inches and the uterus could be moved laterally. On May 4th Mr. Stormont Murray administered ether, and assisted by my colleague Dr. Rutherfoord (Dr. Seccombe and other visitors and colleagues being present) I opened the patient's abdomen, separated the parietal adhesions and tapped the tumour, thirty-four pints of dark, viscid fluid being drawn off. After a tedious operation, owing to the universal adherence of the cyst in the abdomen and pelvis, I succeeded in removing the tumour, the pedicle of which was doubly twisted and adherent to the large intestine. The right ovary was then brought to the surface and carefully examined, and as it appeared to be healthy and was not enlarged it was returned into the abdomen. The peritoneal cavity was then washed out and a drainage-tube inserted and the wound closed with silkworm gut sutures. The patient made a good recovery, though the pulse was never less than 120 and the temperature kept above 100° till the end of the second week. She left the hospital on June 4th and went to her home, where she remained in good health up to November, 1892, when she became pregnant. Her health was excellent up to July 20th, 1893, at which date she was delivered of a still-born male child which weighed over 11 lb. The presentation was a breech one and the labour very tedious. The child was alive at the commencement of labour; but owing to the unusual size and the marked deficiency of expulsive power, notwithstanding the administration of ergot, it was impossible to save his life. The placenta came away easily and the patient went on well and got up on the eleventh day. It was remarked after delivery that the mother was as slight as ever she had been, and Dr. Seccombe is confident that no swelling other than the contracted uterus could be detected in her abdomen. On the fifteenth day, however, when up and about she had an attack of pain in her right

side which compelled her to go back to bed, where she remained a couple of days, when the pain passed off and she thought no more about it. A month after her delivery she noticed that her abdomen was rapidly becoming enlarged, and later she sent for Dr. Seccombe, who examined her and found a large cystic swelling on the right side of her abdomen. He wrote at once to me, and on Sept. 1st I saw the patient with him and confirmed his diagnosis. It was decided that the patient should wait till October, when she could go into the hospital. She was brought to town on Oct. 4th and re-admitted into the Samaritan Free Hospital, where I examined her and found that the tumour had increased so rapidly in the month as to double its size. There was also much free fluid in the peritoneal cavity, and the patient had again become emaciated and was even in a worse condition than when she came up for her first operation. On Oct. 6th she was put under chloroform by Mr. Murray, and assisted by my colleague, Dr. Bantock (Dr. Seccombe and others being present), I opened the abdomen and disclosed a dark-coloured swelling which was adherent to the abdominal parietes and covered by adherent omentum in its upper part. These adhesions were separated and the tumour tapped, thirty pints of dark thick fluid being withdrawn. It was then seen that the tumour had burrowed into the broad ligament and had passed across in front of the uterus between that organ and the bladder, completely stripping off the peritoneum from the anterior surface of the uterus. This portion of the tumour was enucleated and the broad sheet of peritoneum in front of it tied in four pieces, cut across, and dropped back into the peritoneal cavity. The rest of the cyst was then separated from the surrounding adherent intestine and the pedicle transfixed and tied, and the tumour having been cut away the abdominal cavity was thoroughly washed out and drained. The peritoneum was then dissected off for about an inch round the incision and the scar tissue cut away. The wound was then closed with three layers of sutures, a continuous suture of thin catgut for the peritoneum, interrupted sutures of thick catgut for the aponeuroses, and silkworm gut for the skin. The patient made a rapid recovery and went out on Nov. 4th quite convalescent. Curiously enough, after the second operation the pulse and temperature kept above 120 and 100° respectively for the first fortnight, this condition being due to a small abscess in the lower angle of the wound where the tube had rested.

Remarks.—This is the only instance in which I have met with an ovarian tumour burrowing in front of the uterus and displacing the peritoneum between that organ and the bladder—in other words, completely stripping off the peritoneum from the anterior surface of the body of the uterus. Tumours burrowing behind that organ and raising the peritoneum from its posterior surface are not infrequently met with, but the former condition is, I believe, uncommon. It is not often that the growth of an ovarian tumour can be dated with any degree of certainty, but in this case it is certain that, so far as one could judge by sight and touch, the right ovary was healthy on May 4th, 1892. Dr. Seccombe states that after the patient's delivery in July, 1893, no swelling other than the contracted uterus could be felt in her abdomen. A fortnight later the patient had severe pain in the right side, and about a month or six weeks after her confinement her abdomen began to get big, when on examination a cystic tumour was discovered, and this growth increased so rapidly that when seen a month later it was as large again. I presume the disease started during pregnancy, and that after delivery the pressure having been removed the growth rapidly developed, as such tumours usually do under similar circumstances. The first tumour was a large multilocular growth with dermoid material in parts. The second tumour was very similar as regards size, fluid contents, and, so far as one could judge from the history, in the duration and rapidity of growth, but no dermoid material was observed in it. The patient was in excellent health on Feb. 23rd, 1896.

HIS ROYAL HIGHNESS THE DUKE OF YORK has consented to preside at a dinner in aid of the funds of the Association for the Oral Instruction of the Deaf and Dumb, 11, Fitzroy-square, W., on Wednesday, March 17th, 1897, at the Hôtel Métropole. An appeal is made for the £7000 required to free the association from debt and to purchase the freehold of the premises.

THE INSIDIOUS MARROW-INFECTION OF MAMMARY CARCINOMA.

BY HERBERT SNOW, M.D. LOND.,
SURGEON TO THE CANCER HOSPITAL.

Prevalence.—Secondary deposit within the bone-marrow is a pronounced event in 8 out of every 10 cases of carcinoma mammæ passing to a fatal termination. Whether the remaining 2 are completely exempt to the end is at present doubtful. Of 150 seen in the out-patient room at an average duration of from ten to twelve months, 90 showed well-marked symptoms of this peculiar condition at their first visit, 22 showed symptoms in a slighter degree, and 8 developed them subsequently under observation; total 120, or 80 per cent. The physical signs were absent or doubtful in 30, which fall into two classes, those too recent to betray them, and "atrophic" cases. Thus 12 were of from six weeks to six months' duration only and 4 from six to twelve months. Of the remainder, 12 were extremely chronic forms of the disease, which had already existed from two to sixteen years, 5 out of the 12 having grown slowly for more than nine years. It is these "atrophic" cases in women that alone show prolonged exemption from the marrow lesion; the breasts are previously scanty or shrivelled, approaching the male type; life is not terminated for a long term of years, sometimes for more than twenty or thirty, and the exemption aforesaid largely accounts for this peculiar chronicity.

Mechanism of the infection.—Average examples of mammary scirrhus in women infect the lymph glands within the corresponding axilla in from six to twelve weeks from inception. The malignant cells quickly block the lymph sinuses and diversion of the current takes place in abnormal directions. These glands receive lymph from the marrow of the adjoining humerus; when they become cancerous regurgitation ensues, and thus deposit takes place within this bone, ordinarily the first affected. Again, from the inner edge of the mamma a few lymphatics normally pierce the thoracic wall and convey lymph to the mediastinal lymph glands and also to the thymus, a lymphoid organ whose rudiments are never wholly obliterated, but persist through life as a fatty mass immediately behind the sternum at the junction of its upper and middle portions. Thus malignant cells reach the thymus, and, there proliferating, directly invade the sternum. In the third place, and usually after a considerable lapse of time, fragments of cell-protoplasm pass from the marrow into the blood-current and thence invade other bones, the opposite breast, or the viscera. The above is the ordinary route; but as the infection is a mechanical process it is to be noted that interference with the normal lymph-current (as by an operation and its resulting scar in the axilla) may preclude infection of the humerus, the flow then passing wholly to the mediastinum and thymus.

Symptoms.—The physical signs of marrow-infection are rarely evident until the disease has existed eighteen months and may be delayed much longer. They are threefold, and to be classified in relation to (*a*) the humerus, (*b*) the sternum, and (*c*) the quasi-rheumatic pains in the loins and scapulæ. The upper third of the humerus becomes tender on pressure, apparently from irritation of the periosteum; the bone also feels slightly thickened in comparison with that on the opposite side. The sternum displays a very slow and gradual bulging forward at the junction of the upper and middle portions; it is painless and is seldom noticed by the patient until her attention is directed thereto. It proceeds only to the development of a sufficiently conspicuous prominence and then stops, resulting in actual tumour formation only in from 2 to 3 per cent. Lastly, the quasi-rheumatic pains are a late phenomenon and are referred to the lumbar region, scapulæ, and arm of the same side as the lesion. They are deeply-seated, described as "gnawing" or "aching," are, like ordinary rheumatism, worse at night and alleviated by salicylates, but, unlike that, do not affect the articulations. In advanced cases there is extreme physical weakness with emaciation, due seemingly to the cytogenic function of the marrow.

Diagnosis.—The sternal prominence may be simulated by

natural conformation of the part. It is only when this occurs in association with the gnawing lumbar and scapular pains, and particularly when its gradual development has taken place under observation, that full reliance can be placed thereon as pathognomonic of the infection.

Morbid anatomy.—Deposit within the medullary canal of a long bone results in "white" marrow. That substance is converted into a relatively firm material as white as note-paper; the existence of this suffices to indicate carcinoma without microscopic examination. With the cancellous tissue of short and flat bones the test does not hold; the marrow is not altered in colour or in consistency, even when full of cancer-parenchyma, and the presence of the latter can only be established by the microscope. Decalcification takes place, however, under all circumstances, when there is cancer deposit in a bone. On exposing the head of a humerus so affected the point of the scalpel can be readily pushed into the greater tuberosity—a rough test I have not yet known to fail. In advanced cases, those, for instance, in which brawny œdema of the arm is present, the bone can be sliced with the knife as readily as the soft parts.

The following are typical cases showing the clinical course and the average chronicity:—

CASE 1.—A woman aged forty years had her left breast with enlarged axillary glands removed in June, 1887, for scirrhus of a year's duration. No marrow symptoms were then present. She was not seen again till December, 1892, when the sternal condition with the quasi-rheumatic pains were present, but there was no other trace of cancer. In December, 1893, two small nodules were found close to the sternum, and shortly afterwards a third, while the patient's health became impaired.

CASE 2.—A woman aged fifty-four years in January, 1881, underwent excision of the left breast and enlarged glands for scirrhus of one and a half years' duration. In March, 1884, the sternal symptom was conspicuous, but there was no other indication of cancer. In February, 1885, the original scar was still perfectly healthy, but there was a mass of enlarged glands in both axillæ. The patient is still strong enough to work as a domestic servant.

CASE 3.—A woman aged sixty-one years had a large carcinoma of about two years' duration excised in July, 1886, the size of a small orange; the axilla was also cleared. There was no re-attendance until June, 1893; then the sternum was so prominent as almost to constitute a tumour; there were a small subcutaneous nodule over the xiphoid cartilage and a cluster of enlarged glands in the opposite axilla, but the scar was healthy. In July, 1893, the patient died from paraplegia through deposit in the vertebræ.

CASE 4.—A woman aged sixty-four years was seen in August, 1888, with a breast scirrhus of eighteen months' duration following on cyst of twenty years' duration. Operation was declined till August, 1892, when there were a large sore and a mass of glands in the axilla, and the sternal prominence was well marked. In June, 1895, a nodule the size of a bean appeared under the scar, there were lumbar pains and sternal prominence, but otherwise the patient was in good health.

CASE 5.—A woman aged sixty years had the left breast excised in October, 1888, for a large acute carcinoma of probably two years' duration. In January, 1889, the sternal symptom had developed, with no other palpable deposit. This was followed in the succeeding July by implication of the opposite breast.

Non-insidious cases.—I have only five or six times seen the sternal protuberance proceed to actual tumour-formation with subsequent ulceration. In a small percentage only of the total cases does the marrow infection betray itself in this way by tumour growth, or, secondly, in a long bone by spontaneous fracture, or, thirdly, in the vertebræ by distortion or paralysis. All the specimens so far preserved in museums belong to this non-insidious category, in which some obvious lesion has induced examination of the particular bone in question. The bones, again, have often been mounted as "dry" specimens of "fragilitas ossium," or absorption of lime salts, the actual presence of cancer-parenchyma not having been recognised. Torok and Sprengel found palpable lesion in 12 out of 467 cases = 2·56 per cent.[1]

Inferences and conclusions.—The most suggestive point about this condition is its peculiar chronicity and latency, with the bearing these have on some other obscure diseases in whose phenomena the bone marrow is probably concerned. We find that even in a malady ordinarily so acutely progressive as carcinoma the deposits here may grow unnoticed for from four to five years or more, and they cause hardly any appreciable impairment of health until finally culminating in general diffusion by the blood. The marrow is practically never examined at necropsies unless some palpable lesion there exists; my investigations invite much closer attention thereto. Many of the cases recorded as mollities ossium and osteitis deformans have been found associated with a malignant growth, usually sarcomatous, somewhere in the osseous system,[2] and it seems likely that all will eventually fall into the same category. In malarious countries the bone-marrow of birds is found pervaded by the hæmatophyllum malariæ when absent from the blood. The filaria sanguinis hominis doubtless retires to the same obscure resting place during the corresponding remission period. As a routine symptom marrow infection is shown only by carcinoma of the female breast—this for mechanical and anatomical reasons. It, however, may ensue upon any other form of malignant growth directly implicating the marrow, as in primary sarcomata of bone or in rectal cylindroma adherent to the sacrum. Under none of these latter conditions, however, is it so far known ever to be "insidious."[3] Volkmann's claim of a cure by operation when there have been three years' apparent exemption is of course negatived, unless marrow-deposits can be confidently pronounced absent.

Gloucester-place, Portman-square.

[1] See paper by Mr. S. Paget in THE LANCET, March 23rd, 1889, showing that marrow-symptoms were not then recognised as due to actual cancer-deposit, or the infection as a routine event.

[2] See list of such in Cancers and the Cancer Process, p. 303.

[3] The above condition was first described in THE LANCET of March 7th and 14th, 1891; subsequently in the *British Medical Journal* of March 12th, 1892, where the detailed cases traced to a necropsy may be referred to.

AMPUTATION STATISTICS AT THE LONDON TEMPERANCE HOSPITAL.

BY W. J. COLLINS, M.S., B.Sc. LOND., F.R.C.S. ENG.,
FELLOW OF LONDON UNIVERSITY; SURGEON TO THE LONDON TEMPERANCE HOSPITAL AND TO THE ROYAL EYE HOSPITAL.

THE following table has been prepared for me by Dr. Leonard Wilde, the registrar to the London Temperance Hospital. It includes all the amputations which I have performed there since my appointment as surgeon to the hospital in succession to Mr. Pearce Gould in 1888.

Table showing Amputation Mortality from July 1st, 1888, to Dec. 31st, 1896.

	For disease.		For accident.	
	Cases.	Deaths.	Cases.	Deaths.
At hip	4	—	—	—
Of thigh	9	1	2	—
Of leg	7	—	5	—
Of foot	6	—	—	—
Of toes	12	—	1	—
Of arm	—	—	2	—
Of forearm	2	—	—	—
Of hand	—	—	1	—
Of fingers	19	—	6	—
Total	59	1	16	—

The grand total is 75 cases with 1 death.

The following are the notes of the one fatal case, in which amputation of the thigh was performed for sarcoma of the ham, and in which the post-mortem examination showed pre-existent secondary growths in the liver and pelvis.

A man aged forty-nine years was admitted on March 27th, 1891, on a medical certificate stating that he was suffering from phlebitis. He had been ill for six weeks with pains behind the left knee and down the leg, with œdema of the

foot and lameness. On admission to hospital the left knee was flexed and could not be straightened, and movement of it occasioned some pain. There was a swelling as big as a duck's egg occupying the site of the head of the fibula and extending into the popliteal space. The patient had lost flesh lately, looked more than his age, had had recent trouble (having lost his wife), and wandered a little at night. The case was diagnosed by me as sarcoma of the ham, and amputation at the thigh was recommended should an exploratory incision into the tumour confirm the diagnosis. On April 3rd amputation at a little below the middle of the thigh was performed under chloroform. He bore the operation very well. For a week following the operation the temperature fluctuated between 98° and 103°F. The delirium at night was more marked. On the 11th he had intractable diarrhœa, was delirious, and was losing ground. On the 13th he was passing urine and motions involuntarily. Ether (6 drachms in the twenty-four hours) was ordered. On the 14th the temperature was running higher; there was continuous involuntary diarrhœa unchecked by opium, and he was busily delirious and sleeping badly. The pulse was very rapid—140 and more. Spiritus vini rectificatus was ordered, one drachm to be given every four hours with egg and milk unless he was drowsy. On the 15th he had no sleep; he still took food fairly well. There was no bed-sore. The alcohol was continued every six hours. On the 16th he died.

Post mortem secondary deposits of sarcomatous nature were found in the liver; a large cavity containing new growth occupied the iliac region; there was also an abscess in the *right* inguinal region. There was scarcely any tendency towards repair in the flaps, but there was no osteomyelitis or tracking of pus. The other organs were healthy.

In two of the above cases only was alcohol in any form administered, the case just related being one of the two. The other case was one of amputation of the leg for embolic gangrene in a flabby woman aged forty-nine years with cardiac disease, who recovered. Full details of this and of all other cases in which alcohol is administered are set out in the annual reports of the hospital in accordance with Rule XV. of its constitution, which provides that: "It shall be incumbent on the prescribing medical officer, in any case where alcohol in any form is ordered for a patient, to enter in a book kept for that purpose the full particulars of the prescription, including the time, quantity, and reasons of administration. The effect of the dose also shall subsequently be noted."

Albert-terrace, Regent's-park, N.W.

SCHOOL-MADE INSANITY.

BY LL. HARRIS-LISTON, M.R.C.S. ENG., L.R.C.P. LOND., L.S.A.,

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THE classical statement made by the old-time surgeon, that no injury to the head which produces insensibility is too trivial to be disregarded or too serious to be despaired of, is one the truth of which is frequently in evidence. A case which has recently been under my observation may be quoted as an example, and for other reasons is, I think, worthy of record. It is a case in which a few blows given with the open hand on the side of the head by one boy to another was the exciting cause of attacks of insanity of some years' duration. Although no cause for an attack of insanity is more frequently assigned by parents than a fall or blow on the head during infancy, on investigation some more probable factor is generally to be found. In the report of the Lunacy Commissioners for 1896 3 per cent. only is the proportion of cases in which injury is given as the predisposing or exciting cause in all cases admitted into asylums, hospitals, or licensed houses during the five years 1890–94. In this case the hereditary history is remarkably clear of all nervous diseases, the only instance being an attack of senile dementia in the patient's paternal grandfather at an advanced age.

The first attack began when the patient, then sixteen years of age, was at school, the symptoms being mental depression, sleeplessness, pain in the head, unsociable habits, and loss of nutrition coming on within two months of the injuries. He was taken from school, and after spending a few months at home recovered his natural spirits, became a clerk, and remained well for two years. Then, at eighteen years of age, he had an attack of acute mania, for which he was treated at a lunatic hospital and from which he recovered in eight months and resumed his work as a clerk. For six years he remained well, spending the last year of this period in Canada farming. Then, becoming depressed, fearing that he was about to have another attack, and feeling self-conscious amongst strangers, he lost all interest in his work and, without giving his relatives any warning, suddenly arrived at home. He gradually got worse in mind and body, became despondent, silent, morose, lost all energy, avoided society, refused food, and became emaciated and weak; therefore, he was certified again and admitted, at the age of twenty-five years, to a lunatic hospital, where he became more confused and obstinate and in a few months sank into a state of stupor. After twelve months' residence in this hospital, as he became no better, a change of environment was advised and he was transferred to another asylum, where I first saw him. He was then in a state of melancholic stupor, being resistive and conscious, with a miserable, furtive expression, standing in one place and in the same attitude for hours, with a hand pressed to the head or stomach, taking food unwillingly and sparingly, answering no questions unless repeatedly urged, and then only giving a monosyllabic reply. He was unsettled, restless and sleepless at night, thin, with flabby muscles. The pulse was 64 and weak, the temperature 97° F., the bowels constipated, the extremities cold, and the circulation poor. He remained in this state for two years longer, the state of stupor having lasted altogether for three years, then he gradually began to take some interest in his surroundings and answer simple questions in a whisper. He was then induced to do some outdoor work, and in three months gained flesh and some confidence, but still thinking badly of himself and of his bodily condition. Questioned as to his past state of stupor he said that he remembered everything that had happened around him and that he had often crept away to avoid observation when strangers visited the hospital, that he had feelings altogether different from, and bodily sensations strange to, those he had when in health. In a few months more he still further improved, getting strong in body, slightly hypochondriacal, but having some hope of regaining a position in the outside world. He was discharged as recovered. The treatment of his last attack consisted of giving quinine and strychnine in large doses, malt extract, plenty of food and alcoholic stimulants, warm baths, cold douches, and latterly of manual work out of doors, bicycling, golf, swimming, cricket, &c.

The causation of this case is its interesting feature: blows on the head with the open hand severe enough to cause unconsciousness on at least two occasions, without a lesion of the bone, but producing some molecular disturbance of the brain sufficient to excite insanity. The injury was inflicted as punishment for some minor offences by one of a body of boy prefects, who at the school the patient attended were allowed disciplinary powers, one being to strike a boy on the head, apparently as often and as hard as they deemed advisable; surely a dangerous power to entrust to boys. There are other contributory conditions in the case only prevailing at this period of life, and which exist at many other schools, and which have caused me to call the case "school-made": the age of puberty, one of the periods of life at which nervous diseases are prone to appear; the reprehensible practice of working scholars in the early morning before breakfast and after a long fast; and the emotional influence of constantly recurring religious services carried out in some schools to a ridiculous extent.

Stafford.

THE secretary of the East London Hospital for Children calls attention to the need of funds for current maintenance, and of from £1000 to £1500 to complete the estimated cost of the Convalescent Home which the managers are about to erect at Bognor.

THE total of the subscriptions for the Memorial erected over the grave of the late Mr. Reese of Ystradgynlais, who was killed by lightning on July 21st, 1895, has reached the sum of £102 0*s.* 11*d.*

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF IRIDECTOMY SUCCESSFULLY PERFORMED BY ACCIDENT.

BY HAYDN BROWN, L.R.C.P., L.R.C.S. EDIN., L.F.P.S. GLASG.

A FEW weeks ago two children were playing together near a garden seat. One of them had a pair of scissors in her hand, with the points sticking out, when the other toppled over in some way and brought her left eye in contact with a point of the scissors, which were held firmly in the hand as it chanced to lean on the seat. The result was that the eye was pierced at the corneo-scleroti junction, or perhaps a line above it. A cut was made one-third of an inch long and slightly curved. The point of the scissors entering the anterior chamber went so far as to hook down the iris into the opening, and on withdrawal left it there. I saw the child about an hour after the accident, and having put in an atropine lamella ordered boracic lotion to be used three times a day, ice pretty frequently, and the eye to be kept closed by a bandage. The inflammation of the conjunctiva and iris was rather severe for a few days. The chances of the fluid coming out of the eye had already been so great—and there probably had been some escape, but I did not see it—and the appearance of the cut was such, that I decided at the outset not to attempt to put back the hooked-down iris, which seemed to be cut a little also. This portion, trapped as it was in the wound of the cornea, eventually became absorbed in the cicatrix. There has been complete union for four weeks and entire absence of inflammation, whether of conjunctiva, cornea, or iris. The present condition of the eye is quite indistinguishable from one on which an iridectomy has been most skilfully performed; indeed, it would be difficult to find a case more neatly and perfectly done, and the sight is correspondingly excellent.

Buckhurst Hill.

A CASE OF MERCURIAL POISONING.

BY T. GREENWOOD HALL, M.B., B.S. DURH.

ON Nov. 27th, 1896, I was summoned to a female patient whom I had a week previously attended for a miscarriage. I had ordered injections of perchloride of mercury (one soloid in 40 oz. of water = 1:2000) on Nov. 20th night and morning and again on the 26th. I found her on the 27th collapsed and pale, with the pulse rapid, intermittent, and weak, the jaws tightly clenched, and the eyes dull and anxious. She was unable to speak and I could obtain no history of the seizure. There were twitchings of the fingers and facial muscles and she frequently fainted. During the day acute diarrhœa set in, the motions being stringy and containing blood. I discovered that, not having had a motion for two days, she had on the morning of the 27th injected half of the perchloride solution per rectum and half an hour afterwards was seized with cramping abdominal pains, causing the collapse in which I first saw her. She recovered within a week, though complaining of her teeth and gums. Salivation never occurred. The interesting points are the rapidity of action (less than one hour), the smallness of the dose (not more than 5 gr. per rectum), and the fact that the previous injections per vaginam had no deleterious effects.

Koffyfontein, Orange Free State.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

SURBITON COTTAGE HOSPITAL.

A CASE OF ACUTE PANCREATITIS; NECROPSY.

(Under the care of Mr. ARTHUR C. HOVENDEN.)

IN THE LANCET of Jan. 2nd we published the account of a case of acute hæmorrhagic pancreatitis in which abdominal section was performed, but without relief. Dr. Newton Pitt in his remarks on the case gave a very useful summary of the present-day knowledge on this subject. The symptoms which are considered by Dr. Fitz to be characteristic of the disease are sudden and severe epigastric pain without obvious cause, followed by tenderness, vomiting, slight rise of temperature, flatulent distension of the abdomen, and complete constipation. To these he added collapse, prostration, feeble pulse, and the presence of a resonant area with deep-seated resistance lying between the umbilicus and epigastrium, and evidences of deep-seated peritonitis. Relief has been afforded by operation in a limited number of cases—in one a tympanitic abscess was opened and drained and the patient recovered; in two others in which collections of pus in the pancreas were similarly treated the patients were only relieved for a time. The close resemblance which is presented to cases of intestinal obstruction by acute pancreatitis makes a correct diagnosis almost impossible, but the condition has been diagnosed correctly during life and the possibility of its presence must be considered when symptoms similar to those mentioned are met with.

A man aged thirty-five years was admitted to the Surbiton Cottage Hospital on Aug. 7th, 1896. His family history was unimportant. He had enjoyed good health, but was somewhat given to alcohol. On Aug. 2nd and 3rd he was quite well, and on the latter day he went to a theatre in town. On the 4th he felt a little out of sorts and took "six" liver pills, but they did not act. On the morning of the 5th he sent for a black draught, which was vomited, and during the morning he was in such pain that a medical man was sent for. When seen by Mr. Bowring the patient was in great pain, which was referred almost entirely to the umbilical region. There was no tenderness or rigidity of the abdominal walls and no tumour or dulness could be made out. Attempts were made to cause an action of the bowel by enemata, but without success. During the whole of this day (the 5th) everything given by the mouth had been rejected. On the 6th he was seen again by Mr. Bowring in conjunction with Dr. Taylor. There was still no rigidity and there had been no movement of the bowels. Dr. Taylor thought there were increased resistance and loss of note in the left hypochondriac region and suggested a dose of calomel in the hope that it might be a case of impacted fæces. This was retained, but although several enemata were administered nothing except flatus was passed. In the evening, however, the patient felt better and several times got out of bed to go to the closet, but passed nothing. On the 7th the patient was evidently worse and was sent to the Surbiton Cottage Hospital. On admission the patient lay on his back in considerable pain; the abdomen was rigid and distended; there was no tumour or dulness to be made out; and a few hours after admission he vomited some dark-brown stercoraceous matter. When on the table for operation he again vomited and stopped breathing during the administration of ether, dying before the operation was commenced. The patient had lived only three days from the time he felt unwell; his temperature was normal throughout.

Necropsy.—On post-mortem examination some early peritonitis was found on the anterior portion of the abdominal wall, the small intestine was a little distended, and the descending colon was flaccid but contained grey-coloured

faeces. The pancreas was very much enlarged and of a uniform deep-red colour; the tail of the organ was the size of the closed fist. The liver was large and rather fatty. The kidneys showed a little interstitial change and a couple of cysts. The spleen was healthy.

PRESIDENCY GENERAL HOSPITAL, CALCUTTA.

A CASE OF LOBAR PNEUMONIA FOLLOWED BY GANGRENE OF THE LUNG, AND ONE OF LIVER AND LUNG ABSCESS, IN BOTH OF WHICH OPERATION WAS SUCCESSFULLY PERFORMED.

(Under the care of Surgeon-Captain D. M. MOIR, I.M.S.)

THESE cases further confirm our recent statement of the successful practice of surgery in our colonies, of which we published instances during the past year. They belong to a branch of surgery which has made considerable advance of late, and show what can be done for patients whose condition would have been hopeless only a short time ago. They confirm the conclusions arrived at by Mr. Godlee as to the line of treatment which should be followed. 1. Gangrenous cavities in the lungs should always be sought and if possible opened, and the prognosis, if the operation be successful, is not bad. 2. The same may be said in regard to abscess caused by rupture of purulent collections from other parts into the lungs—at least, as regards the pulmonary complication. The results of treatment in cases of pulmonary abscess in Hofmokl's clinics referred to in the remarks appended to the cases are as follows:—42 cases, 14 cures, 3 had a fistula remaining, 24 died, and in 1 the result was unknown. Five cures resulted after treatment of tuberculous cavities by operation.

CASE 1. *Lobar pneumonia; gangrene of the lung: operation: recovery.*—A man aged twenty-three years had an attack of acute pneumonia of the left lung at Jamalpur on Feb. 13th, 1895. As he did not improve he was taken to Calcutta, a distance of 300 miles, and was admitted into the European General Hospital on March 8th, the twenty-fourth day of his illness. From the symptoms on admission the case appeared to be one of lobar pneumonia, in the stage of resolution, accompanied by slight pleural effusion. He looked and felt very ill and prostrate, and the clearing up of the pneumonic consolidation seemed to be unnaturally delayed. In the course of the first week in hospital his sputa became intensely fœtid, greenish-grey in colour, purulent and nummular. He passed restless nights owing to frequent distressing paroxysmal cough. In the second week he suffered a good deal from diarrhœa and profuse perspiration. It was evident that septic absorption was going on and the physical signs pointed to gangrene of the lung. The temperature was irregular, rising from normal to 103° F. In the third week attacks of hæmoptysis supervened. The cough was very troublesome; the sputum was very offensive, copious, and coffee-coloured, with exhausting sweats and intense prostration; and the diarrhœa recurred. However, the patient's dread of chloroform and of the knife was so great that he did not consent to undergo an operation until his condition had become almost hopeless. The operation was performed at noon on March 28th—i.e., the twenty-first day in hospital and forty-fifth day of his illness. From the physical signs, which were best marked in the axillary and infra-spinous part of the scapular region, it was evident that the gangrenous portion of lung was on a level with the mammary region (from the third to the sixth ribs), and that the most suitable place for incision and drainage would be between the fifth and sixth ribs in the axillary area. Accordingly, a horizontal incision two inches long was made in the fifth intercostal space of the left side, which was followed by the escape of a small quantity of fœtid purulent fluid and débris. By the finger it was ascertained that the axillary part of the pleural cavity corresponding to the area of gangrenous lung had been shut off by adhesions from the rest of the pleural sac. On exploring with a Wheelhouse's straight-grooved urethrotomy staff the instrument was found to pass far into the lung so as almost to touch the pericardium; in fact, the impulse of the cardiac systole was transmitted to the staff with startling force and distinctness. Portions of gangrenous lung and pleura-débris and blood-clot were removed with the aid of the fingers, dressing forceps, and a long Volkmann's spoon. A drainage-tube four inches long and three-quarters of an inch in diameter was introduced and an absorbent antiseptic dressing was applied. As so frequently happens in India after an operation the temperature rapidly rose. It had been 97·2° (taken in the mouth) at 9 A.M., 98·2° at 1.30 P.M. after the operation, and by 5.30 P.M. it rose to 103·4°, the highest temperature recorded throughout his stay in hospital. After the first day his temperature caused little or no anxiety, rarely rising to 101°, more usually fluctuating between 98° and 100° during the first fortnight, subsequently to which it gradually returned to the normal. At first the dressings were changed twice daily owing to the profuse discharge, and frequently pieces of slough were removed. The drainage-tubes were gradually shortened and replaced by tubes of smaller calibre, the last of which was finally removed on April 21st, and the wound was quite healed on the 30th. The patient's health rapidly improved and he gained ten and a half pounds in weight between April 21st and May 8th. When he was discharged from hospital on the latter date the following note was recorded: "The percussion note is clear and slightly hyper-resonant in the left axillary region. The breathing is harsh and an occasional moist sound is audible near the incision scar in the fifth space. The lung is soundly healed and he may leave hospital." The patient's mother, who had recently been operated on by Surgeon-Captain Moir, on Sept. 3rd told him that her son resumed work exactly a month after leaving hospital, and that he was then away on a shooting expedition.

CASE 2. *Liver and lung abscess; operations; recovery.*—A man aged thirty-four years, a slim Eurasian of poor physique, was admitted to hospital on Jan. 27th, 1896, complaining of fever, cough, pain in the liver, and enlargement of the spleen. Some years ago while in the Punjab he used to suffer much from malarial fever. In 1888 he had gonorrhœa and a perineal abscess. In 1892 he was treated for abscess and fistula in the perineum. On July 19th, 1895, he was in this hospital for balanitis and diarrhœa. The latter was rather obstinate and continued till the end of the month. On Aug. 1st acute dysentery suddenly supervened lasting for three days, during which time he passed mucus, blood, and a few small sloughs. He left the hospital on Aug. 8th before he had thoroughly recovered. During October and November he was in the Medical College Hospital, Calcutta, suffering from fever and pain in the region of the liver. From Jan. 3rd to 13th, 1896, he was treated in the General Hospital, Calcutta, for hepatitis and was discharged apparently cured, but he returned on Jan. 27th with the symptoms detailed above. The case proved most puzzling. During the first week he appeared to be suffering from ague, with congestion of the liver and spleen—common accompaniments in malarial subjects. From the 27th to the 31st the temperature was intermittent, but it seldom rose above 100° F. In the beginning of February the hepatic pain disappeared, and the temperature remained normal until the 4th, when it rose to 101°. From the 5th to the 20th there was no fever. Notwithstanding this it was quite evident that the man was seriously ill, because he continued to lose flesh and strength. The frequent short dry cough led to numerous examinations of the lungs, but nothing definite was found. The antecedent dysentery and hepatitis early caused a suspicion of liver abscess and the liver was examined nearly every day, but with a negative result. During the first three weeks of February the hepatic pain came and went capriciously. Even the site of the pain varied in an extraordinary way; at one time it was in the right lobe, high up or low down, deep-seated or superficial, whilst at another time it was in the left lobe. Since there was no fever and the symptoms were so obscure it was not considered expedient to make any exploratory punctures in the liver. However, Nature settled matters in her own way. On the 21st he began to cough up pus owing to a liver abscess having burst into the right lung. On the 20th his highest temperature was 99°, and on the 21st 99·4°, after which it remained normal until the 26th, when it rose to 101·4°. There were also slight rises on the 27th and the 28th. As many cases have been recorded in which recovery has followed the discharge of a liver abscess into either the lung or the bowel, and as there were no unfavourable symptoms, it was decided that no operation was necessary. In March, however, his symptoms became unfavourable and gave cause

for anxiety. Between the 1st and the 13th the temperature remained normal most of the day, but usually there was an evening rise between 5 and 9 P.M. to 99° or 99·6°. In fact he was suffering from hectic fever. The cough became very troublesome and the expectoration copious and he had profuse perspirations with restless nights, consequently it seemed advisable to try to drain the liver abscess. On March 13th after using the exploring needle, a horizontal incision two and a half inches long was made in the sixth intercostal space two and a half inches below the right nipple. On pushing the finger through a thickish layer of liver substance the abscess cavity was reached. Ten ounces of pus were evacuated and a large-sized drainage-tube was inserted. It was not possible to palpate the aperture of communication through the diaphragm into the lung. On the next day his temperature was normal and he had neither cough nor expectoration. The drainage-tube was gradually shortened and changed and was finally removed on the 24th, at which time the track was scarcely more than an inch long. On the 30th he weighed 105 lb.—a gain of 2 lb. since the last weighing, four days prior to the operation. During the first week of April the cough again became troublesome and the sputa were viscid, greenish, and nummular. At this time the percussion dulness began one and a half inches above the right nipple and merged into the liver dulness. By the 9th the wound was completely healed. The temperature remained normal and he gained steadily in weight. On the 21st he weighed 114 lb.—a gain of 11 lb. since the weighing previously to the operation. After this date, however, there was a relapse. The fever returned and the temperature varied from normal to 102°. The cough became most distressing and the expectoration very copious and purulent, and there were occasional attacks of hæmoptysis. His feet became œdematous, he suffered from exhausting sweats and restless nights, and his appetite failed. The physical signs indicated excavation of the right lung in the axilla and about the mammilla. Accordingly on May 5th an incision was made far back in the right axilla over the fifth rib, one inch of which was resected. After puncturing the lung and dilating the passage a small cavity was found which extended upwards and inwards above the level of the nipple. This communicated with another cavity, below the nipple, which led down to the diaphragm. By introducing a metal bougie, the curve of which was convenient, a counter opening was made in front in the fourth space below the nipple and above the scar of the incision into the liver abscess. Some lung débris, pus and blood were evacuated from the lower cavity in the lung. Through the axillary incision a drainage-tube over three inches long and half an inch in diameter was introduced into the upper cavity. A drainage tube nearly five inches long and three-fourths of an inch in diameter was passed in from the anterior incision, through the lower cavity and towards the lateral incision. He passed a restless night and complained of great pain in the epigastrium. On the next day (the 6th) the dressings were soaked with copious discharge, and the expectoration contained blood and pus. The highest temperature was 100°. After another restless night his temperature was normal (on the 7th) and the discharge and expectoration were much diminished. He began to improve, but the drainage-tubes were a constant source of trouble from the difficulty of retaining them *in situ*. They were gradually shortened and changed for smaller ones and were finally removed on the 23rd. The wounds closed rapidly. On the 29th he was carried downstairs and weighed for the first time since April 21st. It was found that he had lost 20 lb. 8 oz., his weight having fallen from 114 lb. to 93 lb. 8 z. During June he steadily gained weight and on the 26th he weighed 108 lb. 8 oz. His fingers and toes became markedly bulbous or clubbed. There were various ups and downs in the progress of his convalescence, which was very gradual and tedious. In the second week of July he was able to be out of bed and it was noticed that he tended to lean over on the right or affected side in walking. The expansion of the right side of the chest was defective. On July 24th his weight was 113 lb. 11 oz., which was nearly as much as it had ever been while he was under observation. During the latter half of July he improved rapidly in every way, so much so that he was fit to be discharged from hospital and to be sent to the Eden Sanatorium at Darjeeling on the 29th. At this time there was comparative dulness over most of the right side of the chest in front, and the pectoral muscles on this side were atrophied. The expiration was prolonged and the breathing slightly harsh, but there were scarcely any accompaniments, except some medium râles at the anterior border of the axilla on a level with the nipple, and also posteriorly about the same level. The expectoration was very scanty, greenish, and muco-purulent. The ungual phalanges of the fingers and toes were distinctly clubbed. Since the patient left the hospital Surgeon-Captain Moir has had good accounts of him from time to time. The last report, dated Sept. 9th, was from the assistant surgeon in charge of the Eden Sanatorium, who stated that "he is doing very well, has no bad symptom of any kind at present, and weighs 127 lb."

Remarks by Surgeon-Captain MOIR.—As regards Case 1, gangrene is not a common sequel to acute pneumonia, and when it does happen it is usually in the case of an alcoholic or aged person or when pneumonia is an intercurrent complication of some other exhausting disease. But pneumonic gangrene in a previously healthy young adult must be of rare occurrence. This patient was a strong young man leading a healthy life as a fitter in the railway workshops, who devoted most of his spare time to out-door sports. In his case the excision of a portion of a rib was distinctly contra-indicated, nor did it seem advisable to syringe out the cavity, although this procedure is advocated on good authority. One practical difficulty in the treatment of such a case is the great tendency there is for the drainage-tube either to slip out or be extruded, and also the rapidity with which the track of the tube contracts once the latter is expelled. Nevertheless, it is essential to maintain effective drainage until both expectoration and discharge have ceased. Regarding the statistics of operation for gangrene of the lung Dr. Pendleton Dandridge[1] makes the following statement: "Of the result in gangrenous cases Lopez reports seventeen cases of gangrene treated by opening the cavity, followed by ten cures, six deaths, and one 'unknown'; Hofmokl, twenty-four cases, with seven cures, one unimproved, thirteen deaths, and two unknown, whilst in one a fistula remained."

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

The Biology and Morphology of the Tetanus Bacillus.—Exhibition of Specimens.

A MEETING of this Society was held on Jan. 5th, the President, Mr. H. T. BUTLIN, being in the chair.

Dr. A. A. KANTHACK and Mr. W. T. CONNELL read a paper (with lantern demonstration) on the Biology and Morphology of the Tetanus Bacillus. On gelatin the colonies are numerous but very minute and give rise to liquefaction in seven to eight days. On agar-agar there are also numerous and minute discrete colonies which do not coalesce, the surface ultimately having a beautifully crystalline appearance. Impression specimens show that the colonies consist of a close network of filaments sending out branches in different directions. Some of the bacilli are clubbed. The clubbing and the filamentous arrangement point to a mycelial ancestry of the tetanus bacillus. In old broth cultures spore-bearing bacilli are common, the bacillus having a drumstick shape, the terminal knob of the drumstick staining faintly or having a deeply stained central dot. True mycelial forms are common in young cultures, resembling those of the bacilli of tuberculosis and typhoid fever described by Klein. The tetanus bacillus has not one terminal flagellum as usually described, but from twenty to thirty situated all over the bacillus are seen in young cultures; they are long and tortuous, two or three being much coarser than the rest. The flagella gradually disappear when the spore is formed. The drumstick often shows a sheath perforated by numerous channels through which the flagella had passed.—Professor CROOKSHANK had for years observed many of the appearances described and had figured the filamentous forms. After staining by the Ziehl-Neelsen method he had seen the variations in the position and size of the spores. The flagellation of the spores had been very beautifully demonstrated by Dr. Kanthack and Mr. Connell and was a new

[1] Annals of Surgery, xix., No. 2, February, 1894.

observation. He thought that the branching forms indicated a tendency for lower organisms to develop into the higher streptothrix group rather than that the organisms were degraded from a mycelial ancestor.—The PRESIDENT asked what was the cause of death of the animals into whose peritoneum the cultures were inoculated.—Dr. KANTHACK, in reply, said that he thought the bacilli directly caused death, but without characteristic symptoms, because care was taken that no toxins were injected at the same time. He did not claim any priority for his observations on the filamentous forms, but was not aware that mycelial forms had been described before.

Dr. DREW showed a specimen of Villous Papilloma becoming Malignant, situated in the Pelvis of the Kidney. It occurred in a man aged fifty-six, who had pain and hæmaturia, suggesting renal calculus, and nephrotomy was performed. At the necropsy a few months later there was great enlargement of the left kidney by an internal growth which infiltrated the cortex, with enlargement of aortic and lumbar lymphatic glands. There was also growth extending into the ureter and another papillomatous growth in the bladder. The growth in the kidney was formed of a fibrous stroma enclosing spaces containing spheroidal cells and often papillomatous projections. A similar condition was found in the lymphatic glands, but the growth there was more definitely carcinomatous. He referred to eight other recorded cases of papillomatous tumours in the pelvis of the kidney. In several of these a calculus was also present.—On the suggestion of Mr. CLEMENT LUCAS the specimen was referred to the Morbid Growth Committee.

Mr. J. R. LUNN showed: (1) a specimen showing Excision of the Knee removed three years after operation; (2) Femur of a woman aged seventy-two years, whose external condyle had been trephined and the button of bone replaced thirty days before death; (3) Breast of a man aged ninety-one years removed for a fungating growth. Sections showed it to be one of duct carcinoma.—The PRESIDENT said that in a case of his own referred to recurrence occurred three years later. As a rule, recurrence was less rapid in duct carcinoma than in other forms of mammary cancer.—Mr. RAYMOND JOHNSON gave reasons for regarding the tumour as a duct cancer. Villous cancer was a term that led to confusion. He thought that duct cancer was more malignant than was generally taught. — Mr. SHEILD was inclined, after careful examination, to regard the specimen as a scirrhous cancer. He thought that the absence of cysts was against the diagnosis of duct cancer.—Dr. KANTHACK agreed with Dr. Johnson that the hardness of the tumour did not exclude columnar-celled cancer. He also had often noticed that in rapid growths, and in secondary growths the columnar character of the cells was often lost. He thought the sections were those of columnar-celled carcinoma.—Dr. ROLLESTON thought the specimen was a columnar-celled carcinoma of an aberrant type.—Mr. SHATTOCK took the same view.—The PRESIDENT referred to the transition of type of cells seen in Paget's disease of the nipple. He thought the case was clearly one of columnar-celled carcinoma.

Dr. CALVERT showed a Tooth plate which had been impacted in the œsophagus of a young woman for eight months with scarcely any symptoms. She suddenly vomited some blood and died a few hours later. It was found that one flange of the plate had ulcerated into the thoracic aorta.

The following card specimens were exhibited:—

Dr. PARKES WEBER: Cardiac Thrombosis without Valvular Disease.

Dr. TH. FISHER: Broncho-pneumonia with Dilatation of Bronchus.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

Some Points in Abdominal Surgery.—Exhibition of Specimens.

A MEETING of this society was held on Dec. 16th, 1896, Dr. W. B. RANSOM, President, being in the chair.

Dr. TRESIDDER read a paper on Some Points in Abdominal Surgery. Referring to shock in operations on the peritoneum he first drew attention to the peculiarities of the peritoneum—viz., its considerable surface, its great sensibility, its remarkable powers of absorption, and its wonderful powers of healing. The amount of shock in operations on the peritoneum, among other things, would depend on (1) whether it had been previously operated on; (2) the region of the operation; and (3) whether the membrane was inflamed. With reference to abdominal cysts he thought that it was important clinically to ascertain (1) whether they were unilocular or multilocular: (2) whether they were pedunculated or sessile: and (3) whether adhesions existed. In the treatment of cysts deep in the pelvis he had found Trendelenburg's position very valuable. Lastly, with reference to uterine cancer. He had recently performed four operations of vaginal hysterectomy for cancer; in two of these mental complications had occurred, one patient dying from melancholia and the other with recurrence with marked mental depression; the remaining two patients were alive, but one now had recurrence, five months after the operation, and the other was well still, eleven months after. He considered that the limits of complete vaginal hysterectomy were very narrow, and he now preferred supra-vaginal amputation of the cervix, as mental complications were much less likely to follow this operation and, moreover, anatomically the disease tended to spread not upwards to the body of the uterus but in the line of the lymphatics outwards into the broad ligaments. He illustrated points in his paper by a table of seventeen cases of various abdominal diseases that he had recently treated by operation.—The PRESIDENT and Mr. A. R. ANDERSON made remarks on the paper, and Dr. TRESIDDER replied.

Dr. TRESIDDER also showed the following pathological specimens—(1) Stomach showing Healed Gastric Ulcer after Operation; (2) Double Uterus with Pyosalpinx; (3) Five Ovarian Cysts; (4) two specimens of Double Pyosalpinx; (5) Carcinoma Cervicis Uteri; (6) Carcinoma Corporis Uteri, and (7) Microscopic Specimen showing Alveolar Carcinoma of the Body of the Uterus.

The PRESIDENT showed a microscopic specimen of an Alveolar Sarcoma of the Skin.

Mr. ANDERSON showed (1) a specimen of Double Pyosalpinx; and (2) Primary Lympho-sarcoma of the Inguinal Glands with microscopic specimen. He gave also a short clinical history of this latter case, which ran a rapid course, destroying life in two months.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Specimens.

A MEETING of this society was held on Dec. 17th, 1896, Dr. PORTER being in the chair.

Mr. PYE-SMITH showed a woman, aged fifty-eight years, with a large Cystic Tumour of the Neck probably congenital. The tumour was first noticed when the patient was seventeen years of age. It grew to the size of a child's head, and burst when she was forty-nine years of age, discharging fluid blood and continuing to bleed for three days, greatly reducing her strength. It healed and burst again when she was fifty-six years of age and again (twice) a year later. Since then it has never quite healed and now fresh openings are appearing. It always became inflamed before bursting and at present it is somewhat inflamed.

Mr. PYE-SMITH also showed a case of Staphylorrhaphy in which he had used a continuous instead of an interrupted suture.

Dr. ARTHUR HALL showed the following cases: (1) Pityriasis Rosea in a man aged twenty-eight years—the duration of the disease was three weeks; (2) Circinate Papulo-squamous Syphilide of the Chin and Cheeks; and (3) Aortic Stenosis in a young woman with an extremely loud rough systolic murmur, the secondary effects and symptoms being practically nil.

Dr. CUFF showed a case of Tuberculous Lymphadenitis. The glands on the opposite side of the neck were also involved.

Dr. ALFRED ROBINSON (Rotherham) showed a Tongue which had been removed from a two-year-old bullock suffering from Actinomycosis. The case occurred in the winter months, and several other cattle from the same farm had been suffering from a similar complaint. The diagnosis was verified by microscopical examination.

Mr. CYRIL FLORY showed a case of Left Pneumothorax in a man aged fifty years, a silver turner by occupation. The patient's account was that whilst at work on Nov. 1st he felt as if something had given way. He became suddenly very short of breath and broke out into a sweat. There was a history of winter cough for several years, but no injury or any evidence of tuberculosis. The heart was much displaced,

the apex being on the right nipple line. Though the condition had existed for over six weeks there was no fluid in the chest.

Mr. CONNELL gave particulars of a case of Primary Ventricular Cerebral Hæmorrhage and showed the specimen. The subject, a man forty-six years of age, was found in a fit about half an hour before he came under Mr. Connell's observation in the Casualty Room of the General Infirmary. His face was cyanosed, the breathing stertorous and purely diaphragmatic, and the pulse 66 full and bounding. The pupils were dilated and did not react to light, and the limbs were markedly flaccid. The specific gravity of the urine was 1010 and it contained a large quantity of albumin. Uræmia, hæmorrhage into the pons, alcoholic intoxication, opium poisoning, and injury to the spine were thought of, and the diagnosis of hæmorrhage into the lateral ventricles was made during life. This was confirmed by the necropsy. The kidneys were slightly granular and the cortex thinned. The left ventricle was hypertrophied.

Dr. BURGESS showed a girl aged six years with Pulmonary Regurgitation from Congenital Heart Disease. There was a diastolic thrill and murmur in the pulmonary area. The murmur was conducted to the left and heard down the left side of the sternum. Over the aortic area and along the vessels the click of the valves could be made out. The apex was displaced outwards and there was epigastric pulsation. The heart affection was first noticed when the child was about a year old. There was no family history of rheumatic fever.

Dr. PORTER, Dr. HALL, Dr. WHITE, Dr. CUFF, Mr. MAKEIG JONES, Mr. PYE-SMITH, and Dr. BURGESS made remarks.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

Acute Intestinal Obstruction.

A MEETING of this section was held on Dec. 11th, 1896, Mr. WILLIAM THOMSON, President, being in the chair.

Mr. M'ARDLE read a paper on the Operative Treatment of Acute Intestinal Obstruction. The cases quoted were forty-one in number, of which seven were fatal, and included instances of obstruction by bands, intussusception, volvulus, acute enteritis, perforative peritonitis, and appendicular disease. Mr. M'Ardle pointed out that the delay occasioned by trying medicine and enemata often placed the patient beyond the reach of surgery. Prolonged medical treatment was not justifiable, because, as noted by Treves, of 1000 deaths from intestinal obstruction only sixty were from causes removeable by medical means. The chances are all in favour of the obstruction being of such a nature that surgical interference can alone avail. It is therefore to be regretted that some modern writers advocated persistent efforts with enemata, even after dangerous symptoms had shown themselves. Mr. M'Ardle did not advocate indiscriminate laparotomy, but after calling attention to many cases of acute intestinal obstruction in his hospital and private practice in which death occurred before he had an opportunity of operating on the cases he held that with the present safe methods of dealing with abdominal wounds and the rapidity with which Paul's tube, Murphy's button, and such appliances enable us to deal with lesions of the bowel, the intestines should be exposed much earlier and with greater frequency. The points on which greatest stress was laid were—(1) that all fluids should be removed from the pelvis and loins by irrigation with sterile water; (2) that the circulation in the intestines should be restored and peristalsis established by irrigating with boiled saline solution before returning them to the abdomen; and (3) that a tube passed through the rectum should be guided by the hand within the abdomen until flushing of the colon could be thoroughly carried out, so as to reduce the intra-abdominal tension and assist the return of the protruded bowel. When a surgeon is called to a case of complete obstruction of the bowel which has resisted judicious medical treatment and in which evidence of peritoneal effusion exists it is his duty to operate at once.

The PRESIDENT said he was sorry that Mr. M'Ardle had not described the symptoms or methods by which he arrived at the conclusion that those particular cases were cases for operation and not suitable for treatment by ordinary methods.

Mr. TOBIN said that if they applied to all cases of obstruction the rule that they applied in strangulated hernia, they would do well. Who now hesitated to do taxis for the cure of strangulated hernia before any serious disturbance had taken place? An early operation in a great many cases of intestinal obstruction would effect a radical cure. The persons who were most afraid of laparotomy were those who began it too late.

Mr. CROLY was entirely an advocate for early laparotomy in cases of acute intestinal obstruction.

Dr. ALFRED SMITH said that he assisted Mr. M'Ardle in operating on a case in which the patient was so bad that it was not necessary to administer ether before the operation; and he was greatly impressed by the remarkable change that was produced in the intestines by the use of the hot saline solution. It was exactly like the recovery from a cyanosed condition of a patient who had been given too much ether, after the ether bag had been withdrawn from his face. Mr. M'Ardle's experience as to the great advantage of saline solutions bore out that of everyone who had anything to do with abdominal surgery.

Reviews and Notices of Books.

Traité d'Electrothérapie Oculaire. Par le Dr. P. PANSIER (d'Avignon), avec une Préface de M. le Dr. VALUDE. (*Treatise on Ophthalmic Electro-therapy.* By Dr. P. PANSIER (of Avignon), with a Preface by Dr. VALUDE.) Paris: A. Maloine. 1896. Pp. 479. Price 6 francs.

THE employment of magnetism and of electricity in the diseases of the eye is not a new thing; indeed, the application of electricity is briefly mentioned in most of the larger treatises on ophthalmic medicine and surgery, but such notices altogether fail in stating the kind of current that should be employed, whether continuous or interrupted, the strength suitable for the purpose, the position of the poles, and many other details, leading to the suspicion that those who recommend it have seldom or never attempted to use it. Dr. Pansier tells us in the introductory chapter that the magnet has played an important part in the history of superstition. It was held to excite affection, to calm jealousy, to discover adultery, and to re-unite those who have ceased to love. According to Anselm de Boodt, the ingestion of six grains of a magnet so deranges the economy of those who have had the misfortune to swallow them that they are impelled to leave their homes and even to abandon their country. In surgery we learn from Pliny that a powdered magnet was beneficial in diseases of the eye; others tell us that it was used in cases of epiphora. Mylius declares that a magnetic plaster is capable of extracting every kind of venom from wounds. Held in the hands it was believed to facilitate delivery. It was employed in epilepsy and in many other affections, sometimes apparently with success. A second chapter deals with the history of electricity, and the various forms of machines that have been devised for the production of statical and current electricity are described. An account of the electric phosphene is then given—that is, of the luminous sensation that is felt in the eye on opening and closing the constant current; and it is noted that Darier found it serviceable as a means of diagnosis, since in the normal state and in cases of amblyopia without lesion a luminous impression is produced by a current having an intensity of less than a tenth of a milliampère, whilst when the optic nerve is atrophied no phosphene is perceived till the intensity is greater than three-tenths of a milliampère. Dr. Pansier proceeds to consider the effects of electrical currents in numerous diseases of the eye, as in the various kinds of amblyopia, including those of traumatic, hysterical, nicotinic, alcoholic, and strabismic origin; in hemeralopia, in atrophy of the optic nerve, in diseases of the iris, choroid,

and retina, in glaucoma, in keratitis and its sequelæ, in paralysis of the ocular muscles, in exophthalmic goitre, and in various affections of the lids, as trachoma, ciliary blepharitis, chalazion, and distichiasis; and there is a section devoted to the use of the magnet. In nearly all these affections references are given to the operator who has employed the remedy, and in many instances a short history of the case is given, with details of the strength and kind and direction of the current employed. In some affections where electricity is rarely employed in this country excellent results have been obtained elsewhere. Thus Driver, Seeger, Meyer, and Adler, as well as the author, have effected the removal of leucomata. On the other hand, great caution is required in accepting the statements of enthusiasts. Cataracts, for example, seem to have been occasionally dissipated by electricity. The author cites the case of a woman aged sixty-nine years in whom a cataract in each eye was diagnosed by Professor Agnew. Constant currents were applied by Neftel, the anode being placed on the neck and the cathode on the eye for a period of ten or fifteen minutes. After twenty-five sittings the cataract disappeared and the patient recovered his vision, wearing his former glasses. Unfortunately for this remarkable story, Professor Agnew himself followed up the case and found the cataract *in statu quo*. No change had occurred. It was only an ordinary case of slowly developing cataract. Better results have no doubt been obtained in cases of ocular paralysis and especially in those of exophthalmic goitre, several examples being on record of great amelioration being effected by galvanisation of the sympathetic. The want of a soberly written and critical treatise on the place of electricity in ocular therapeutics has long been felt, and we venture to recommend Dr. Pansier's book as a trustworthy exposition of the present state of our knowledge on the subject.

Life in West London: A Study and a Contrast. By ARTHUR SHERWELL. London: Methuen and Co. 1897. Price 2*s.* 6*d.*

"SUNT lacrymæ rerum, et mentem mortalia tangunt." Mr. Sherwell's book involuntarily reminds us of the above untranslatable line. Here are to be found depths of misery and wretchedness which most of us probably had never dreamed of. Mr. Sherwell mentions in his introduction that Soho, the quarter with which his book chiefly deals, possesses the pathetic interest that always belongs to a neighbourhood that "has seen better days" and incidentally he forecasts the same future for Kensington. In our opinion no future in store for Kensington could be worse than the present state. The old church is gone and in its stead is a Gothic building absolutely correct and as absolutely lifeless. The Terrace has been carted away and its site covered with monstrous shops, and the old High-street is being rapidly converted into a sort of Westbourne-grove. Remain only Kensington-square, the one or two old houses in Church-street, and, we trust, the unique South-end Buildings. Soho never suffered this degradation. She passed straight from being the home of wit and fashion to poverty and slumminess, but was never vulgarised. It is better to see a fine old house turned into a human rabbit-warren than for its place to be taken by a packing-case composed of walls, iron girders, plate-glass windows, and stuffed to the roof with "cheap lines," representing the very evils Mr. Sherwell complains of; for the lost house can never be replaced, while the rabbit warren may, by dint of care and good legislation, be made at least sanitary. Mr. Sherwell's figures on the state of overcrowding which obtains in Soho and in other parts of West London are simply appalling. Thus the percentage of the total population of persons living four or more to one room 10 in Soho and 4 in Kensington, compared with 3 in Bermondsey. Mr. Sherwell remarks that it would probably startle nine-tenths of the inhabitants of Kensington to know the amount of overcrowding in their sanitary area. We do not know how it may be now, but some seven years ago there were houses in Kensington which for dirt and poverty surpassed anything that could be seen in St. Luke's. This overcrowding is, of course, responsible for much of the misery and want in the district; but it is not to be wondered at when single rooms rarely let for less than 5*s.* or 6*s.* a week and three rooms from 14*s.* to 25*s.* a week, and this, too, when efforts have been made to remedy this defect by the erection of "models," but even these have not solved the problem of rent.

Comparing them with the Peabody Buildings we find:—

Soho.

Single rooms	6*s.*	per week.
Two small back rooms	7*s.* 6*d.*	,,
Three small back rooms	10*s.*	,,
Two front rooms	10*s.*	,,
Two front rooms and one back ...	16*s.*	,,

Peabody Buildings, Shadwell.

One room	2*s.* to 2*s.* 3*d.*	per week.
Two rooms	3*s.* 3*d.* to 3*s.* 6*d.*	,,
Three rooms	4*s.* 3*d.* to 4*s.* 6*d.*	,,

The results of overcrowding are well known—easy spread of infection, propagation of disease, and a high mortality, especially infantile, are among them. We may at present leave morality out of the question.

To take an example, the deaths per 1000 in 1894 from phthisis were: 3·2 in the Strand; 3·1 in St. Giles-in-the-Fields; 2·3 in St. George-in-the-East; 1·5 in Kensington; and 1·3 in St. George, Hanover-square.

Soho and neighbouring districts suffer, as, in fact, all large towns do, from the uncertain character of the work. During the season there is an enormous pressure of work, while from August to November nothing is done. Another unfortunate feature is the variety of trade carried on. The people are apparently a sort of industrial Ishmaelites; there is no cohesion, no pride in their work. There are, of course, dressmakers and tailors, but they work under conditions which make it impossible to be a good craftsman, and as for waiters, kitchen porters, supers, cab touts, and sandwich men, how can any of these work with any idea of the dignity of labour or feel that if a thing has to be done it is best to do it as well as possible? We have not space here to go into Mr. Sherwell's analysis of the tailoring trade in West London, with its appalling revelations, and we think he lays a little too much stress upon the follies, vices, and pleasures of wealthy West London. We cannot think that this is the major cause of the poverty of Soho. So complicated a problem is not easily solved. If more model buildings—not great barracks, but three- or four-storied buildings—were to be erected and properly managed, we believe they could be let at moderate rents, would soon be self-supporting and would go some way towards meeting the overcrowding difficulty. Lord Rowton has solved the problem and so, apparently, have the Peabody trustees. There is the Guinness Trust; and, to deal with miscellaneous monies, there were in 1894, according to Mr. Burdett, some £13,000,000 raised in Great Britain for charities. Of this sum £5,000,000 odd were received by London institutions. Surely it would be possible out of this pile of gold [and it must be remembered that in addition there is an enormous amount of charity which never finds its way into subscription lists, for the above figures do not include any money for so-called "Church work"] to arrange better times for workers, better houses, better homes, and happier lives. It is no good teaching Board School children physiology, or, indeed, anything, until they have decent homes and food. Mr. Sherwell does not offer

any solution of the problem he puts forth, but such a sombre picture has never been drawn since Mayhew's "London Labour and London Poor." The craftsman, poet, and worker who has so recently passed from us, managed to get good work done, to pay his men well, and not to lose money. If one man could do this it is not impossible that others may do likewise.

Eléments d'Ophtalmologie Journalière. (Elements of Every-day Ophthalmology.) Par les Drs. A. PUECH et C. FROMAGET, ex-Chefs de Clinique à la Faculté de Médecine de Bordeaux. Paris: Société d'Éditions Scientifiques, 4, Rue Antoine-Dubois. Pp. 246.

THIS is a compact little book giving a short but correct description of the chief affections of the eye with the simple treatment at the command of a practitioner who has not devoted himself especially to ophthalmic work; but the authors have wisely refrained from entering into any details of such surgical operations as are required for entropion, ectropion, strabismus, and the like, and although extraction of the lens in cases of cataract and iridectomy are described few would venture to operate with no more information than can be found in its pages. We are somewhat surprised to see jequirity recommended for pannus, since it is a remedy which, though it may be efficacious in practised hands and in a properly selected case, is yet liable to set up uncontrollable inflammation and would require more careful watching than is here suggested. The authors strongly recommend sub-conjunctival injections in cases of hypopyon-keratitis, using 1 part of sublimate and 2 parts of sodium chloride in 2000 of water. They state that they have had good results from large injections, but that they are apt to produce pain, chemosis, and considerable œdema of the eyelids, symptoms which would tend to shake the confidence of the patient in the surgeon, especially if he were young, and, therefore, should not have been mentioned here. In speaking of wound of the cornea with prolapse of the iris the use of eserin during the first few hours should have been mentioned if the prolapse is near the periphery of the iris. There are no illustrations, but the work, being reliable and written in short and clearly expressed sentences, might well be used as a primer for a student who wishes to learn to read an easy book in French.

At the Court of the Amir. A Narrative. By JOHN ALFRED GRAY, M.B. Lond., late Surgeon to H.M. the Amir of Afghanistan. London: Richard Bentley and Son. 1895.

AFGHANISTAN, apart from any question of politics, is an intensely interesting country and its present ruler a very remarkable man, so that any book dealing with life in that country is generally worth reading. Dr. Gray was, of course, on terms of great intimacy with the Amir and saw a great many things which are hidden from the eyes of the casual traveller. Dr. Gray's first introduction to the hospital at Kabul was rather amusing. He found about eighty Afghans waiting to be cured by the "Feringhi doctor," and a guard with fixed bayonets had to stand at the door to keep back the crowd. This system might be introduced over here, perhaps, with advantage as a measure of hospital reform, and we are sure would meet with the approval of many an overworked house surgeon or house physician.

We might go on quoting all sorts of delightful stories from this book, but we have only space for one. It shows at once the best and worst traits of Oriental character, and makes the reader understand how it is that every foreigner who is brought into contact with the Amir seems to feel a strong attachment for that very remarkable man. "His Highness had heard that I was ill and I told him that I had not with me the medicine I wished to take. His Highness asked, Would I take native medicine if he prescribed it? I said I should be most grateful to His Highness if he would honour me so far. His Highness gave some directions to a Hakim, who presently brought a small jar. The Amir told me it contained a medicine he was himself taking. With a little silver spoon he took some dark-looking confection out of the jar, made a bolus of it, and gave it to me. It tasted hot and very nice. There was no more in the pot and he sent the Hakim away to make some fresh. It was then that my mind became troubled within me, for I knew the Hakim loved me not. Presently the jar was brought back, and as they were about to give it me His Highness asked for it. He scooped a little out with the spoon, and was raising it to his lips when the Hakim stopped him and whispered in his ear. The Amir turned and looked at him, and the Hakim hurried away with a very red face. By-and-by he returned with the jar. Again the Amir took it, and, looking at me, he raised a spoonful to his lips and swallowed it. He then gave the jar into the hands of the Armenian, who immediately brought it to me." It is needless to comment upon the courtesy and kindliness displayed by this act. Our readers will doubtless remember some articles by Dr. Gray, entitled "Afghan Physicians and Surgeons," which appeared in our columns during June, 1894. Several of the incidents therein mentioned have been incorporated in the book we now notice, and we have no hesitation in saying that all those who enjoyed the former articles will equally appreciate this book.

LIBRARY TABLE.

Sell's Dictionary of the World's Press. London: H. Sell, 1897. Price 7*s.* 6*d.*—This now well-known annual appears for the seventeenth time, and has been specially compiled to commemorate the sixtieth year of Her Majesty's reign. The new volume is appropriately styled the "British Empire Edition," and the front cover is embellished with a crowned portrait of the Queen. As is explained in the article "The Queen's Newspapers," the book professes to give "a complete and comprehensive account of the Fourth Estate throughout Her Majesty's vast dominions," and to enable this programme to be carried out the foreign section has been excised from this year's edition. The book contains several useful maps and diagrams and is embellished with some interesting portraits and autographs. The first part of the volume, which now extends to 1226 pages, comprises articles of interest, not only to Pressmen, but to every citizen who—as he should do—takes an interest in the Fourth Estate of the Realm. Many interesting and little known facts are given. For instance, few are aware that in the Press Gallery at Ottawa reporters change sides with changes of the Government just as members of parties do at home. "Leading Lady Journalists with Portraits" gives some idea of the invasion of the journalistic province by the fair sex. Part II. gives a complete list of newspapers, magazines, periodicals, &c., published throughout the British Empire.

JOURNALS AND REVIEWS.

Janus: Archives Internationales pour l'Histoire de la Médecine et pour la Géographie Médicale. (Janus: International Archives of Medical History and Geography.) London: Williams and Norgate. 1896. Price 20*s.* annual subscription.—We desire to call attention to this most interesting periodical issued in Holland, but obtainable in all parts of the world. It is of a strictly international character, the articles it contains being written either in French, German, or English. Issued at bi-monthly intervals, the first two numbers have now appeared, Professor Stockvis of Amsterdam leading off with an interesting article entitled "*Janus* Redivivus"; for it appears that this is not the first time that a journal of like name and purport has been published. Half a century

ago Dr. Henschel, Professor of Clinical Medicine at Breslau, conceived the idea of an international journal dealing with the history of medicine, and obtained the coöperation of some of the best scholars in different countries. He called the journal *Janus*, but it failed to receive the support it merited and ceased to exist after three years. It was revived in 1851 by Dr. Henschel in collaboration with Professor Heusinger, and this time was published at Gotha. This second venture did not, however, exist more than a few years. Professor Stockvis hopes that the new revival will meet with a better fate, and his wish will be echoed by many both in the New World and the Old who take an interest in the subjects with which the journal deals. Besides original articles each number contains bibliographical notices from all countries. Amongst the contributions are articles on Variolation and Vaccination, by Dr. J. Petersen of Copenhagen; an account of his second Visit to Iceland to Study Leprosy, by Dr. Ehlers; and a Study of the Cerebral Cortex and the Physical Substratum of the Mind, by Dr. Adamkiewicz of Vienna. Dr. A. Calmette writes on Snake-poison and Prophylactic Treatment of Snake-bite. An interesting paper (in English) is that of Dr. J. Carlson of Copenhagen upon the History of Diphtheria in Denmark. Dr. Peypers, the editor, reproduces the text of an essay on the Cause of Diseases, written in 1728 by an English physician, who is styled by Dr. Peypers a "pseudo-precursor of Pasteur." In the second number Dr. Fiessinger gives a curious account of the precautions against the contagion of plague adopted in the seventeenth century, illustrated by a quaint drawing of the mask and clothing worn by the medical attendant. An account of "Burnt Substances" taken from Alexander Trallianus is given by Dr. E. Trosse of Neuenahr; and a description of Epidemics of Ergotism in Russia, by Dr. A. Grünfeld. Altogether, *Janus* is a notable addition to periodical literature.

The third number of the *Journal of Experimental Medicine*, edited by Professor Welch of Baltimore and published by Messrs. D. Appleton and Co. of New York and London, fully keeps up the standard promised in the first two numbers. It contains ten articles dealing with Physiology, Pathology, Therapeutics, and Hygiene. The first article is by Messrs. J. J. Abel and Walter S. Davis on the Pigment of the Negro's Skin and Hair. They have been able to collect the pigmented granules of the negro's skin and hair and submit them to chemical examination. They consider that both pigments are identical and are probably the same as the pigment found in the hairs of the white races, the difference being merely one of quantity. In an article on Hæmorrhagic Cysts of the Thyroid Gland Dr. W. I. Bradley maintains that the gross cysts of the thyroid which possess fluid contents are essentially of hæmorrhagic origin. Dr. A. C. Abbott's paper on the Significance of Pathogenic Spirilla in American Surface Waters is of considerable interest. Dr. Abbott has gone very fully into the pathogenic action of a spirillum, not the cholera organism, found in American surface waters. The same author has a very interesting note on the Influence of Acute Alcoholism on the Normal Vital Resistance of Rabbits to Infection, from which he concludes that, with few exceptions, alcoholised animals are much more susceptible, and at an earlier date, to streptococcic inoculations than are non-alcoholised rabbits. Dr. Adler and Dr. Meltzer make an Experimental Contribution to the Study of the Path by which Fluids are carried from the Peritoneal Cavity into the Circulation, and Dr. Meltzer has a Note on Absorption of Strychnine and Hydrocyanic Acid from the Mucous Membrane of the Stomach. Dr. Beyer, in a paper on the Influence of Exercise on Growth, gives records taken from 605 cadets as a standard and compares them with records of 188 observations in a gymnasium, from which he finds that between the years of sixteen and twenty-one there is an average increase of weight in the cadets of 268 kilogrammes and in the gymnasts of 1176 kilogrammes, and he concludes that the "wonderful performance of most of our strong men are well within the reach of the majority of healthy men if such performances were a serious enough part of their ambition to make them do the exercises necessary to develop them." Dr. Mead Bolton and Dr. Herbert D. Pease have apparently fallen into the error of assuming that the fluid developed in electrolysed toxin is a true antitoxin and not Hermite fluid. Dr. Mead Bolton also has a note on the Presence of Antitoxin in Horses that have not been Treated by Diphtheria Toxin in which he finds one-thirtieth of a normal antitoxin unit. Dr. Simon Flexner contributes an interesting study of Terminal Infections which is well worthy of careful reading.

The Scottish Medical and Surgical Journal.—The first number of this new monthly is an excellent beginning, and the list of contributors who have promised literary support is almost a guarantee that a high standard will be maintained. In one of our previous allusions to its forthcoming appearance attention was directed to the fact that the profession in Glasgow was inadequately represented in an undertaking which aimed at being comprehensively Scottish; but this defect has now been satisfactorily remedied. The original articles are eight in number. Professor Stephenson of Aberdeen discusses the Management of Labour in Twin Pregnancies, and concludes that it is safer for the mother and the second child that the labour should be ended as soon as possible, and that in head presentations of the second child it is preferable to turn at once than to incur the risks of delay and the necessity of using forceps. Dr. Clouston of the Royal Edinburgh Asylum writes on Cortical Stimuli. Dr. A. Ballantyne, President of the Edinburgh Obstetrical Society, has a long paper on the Use of Chloroform in Midwifery Practice. Dr. Alexander James of Edinburgh describes a case of Rickets beginning at the age of seventeen years; this paper is accompanied by illustrations reproduced from ordinary and Roentgen photographs. Dr. J. Crawford Renton of Glasgow gives an account of four cases of Sciatica in which exposure of the nerves and removal of adhesions were followed by recovery. Mr. D. M. Greig of Dundee describes a case of Complete Extirpation of the Gall-bladder, with removal of part of the liver; the patient regained good health and could attend to her usual household duties. Dr. Alexander Bruce of Edinburgh has an illustrated paper on a special tract in the Limiting Layer of the Spinal Cord. Dr. David Newman of Glasgow gives details of five cases of Disease of the Kidney which required operative treatment, but presented difficulties in diagnosis. There is also a "Digest" by Dr. George Dean of Aberdeen on the Serum Diagnosis of Disease. Reports of the meetings of societies in Edinburgh, Glasgow, Aberdeen, and Dundee, reviews, abstracts from recent literature, and a section on Scottish medical news fill up the remainder of the ninety-six pages. The editor is Dr. William Russell, assistant physician to the Royal Infirmary, Edinburgh. The publisher is Mr. W. F. Clay, 18, Teviot-place, Edinburgh, whose London agent is Mr. Henry Kimpton. The annual subscription is one guinea.

The Practitioner.—The opening paper is by Mr. Butlin on Sarcoma of the Lower End of the Femur and is illustrated by skiagraphs as well as by an engraving of a longitudinal section. Dr. Patrick Manson describes recent investigations on Bubonic Plague. Dr. John Macintyre of Glasgow has an elaborate article on the Use of the X Rays in Diseases of the Nose, Throat, and Thorax. By large focus tubes and powerful coils he has "succeeded in sending the rays 16 ft. across a room, then through a thick door into the next chamber, and this in sufficient force to show the contents of

a surgical case on the fluorescent screen." For examination of the structures of the nose, throat, &c. he employs fluorescent screens in the form of a tongue depressor put into the mouth. The "Hero of Medicine" this month is Ephraim McDowell of Virginia, the "Father of Ovariotomy"; he performed the operation in December, 1809, and the patient survived for thirty-two years.

New Inventions.

AN IMPROVED ŒSOPHAGEAL PROBANG.

THE extraction of foreign bodies which have become impacted in the œsophagus is an operation frequently required, and one for the performance of which many expedients have been devised. Fragments of bone hastily swallowed at meal times are perhaps the most usual examples of this kind of accident; artificial teeth sometimes also lose their hold and slip down the throat, children swallow portions of their toys, and coins, pins, nails, &c., held between the lips not infrequently disappear in the same way. In many cases these foreign bodies may be caught and pulled out by means of the ordinary œsophageal probang, tipped with a piece of sponge and with an expanding ring of bristles. This instrument, however, is somewhat difficult to pass down into the œsophagus because it must be held by the outer tube, and the sponge-end being pressed back by coming in contact with the back of the throat causes the ring of bristles to open out and thereby impede its entrance into the gullet. To obviate this Messrs. Arnold and Son, London, at my suggestion, have fastened a clip on to the free end of the whalebone to catch the bone end of the catheter, the outer tube. This holds perfectly fast while the probang is being passed, and directly it has gone far enough the finger and thumb open the clip and withdraw the probang with its ring of bristles expanded.

E. MANSEL SYMPSON, M.D., B.C. Cantab., M.R.C.S. Eng.,
Surgeon to the Lincoln County Hospital.

THE ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A MEETING of the Committee of the Association of Fellows of the Royal College of Surgeons of England was held at 5.30 P.M. on Dec. 30th, 1896, at 25, Grosvenor-street. In the unavoidable absence of the President, Mr. George Pollock, Mr. F. J. Gant took the chair.

The minutes of the preceding meeting were read and confirmed.

Mr. H. P. Dunn, the honorary secretary, reported that owing to various causes it had not been possible to arrange for the holding of the annual general meeting of the association, and at the same time pointed out that it would be expedient to call a general meeting of the association at an early date in the New Year. This suggestion was accepted by the committee and the settlement of the exact date was left for subsequent determination. The question of raising the subscription of the association from 2*s.* 6*d.*, as at present, to 5*s.* was then discussed. Various opinions were expressed upon the subject and the general view was in favour of the change. It was ultimately agreed to submit the matter to the annual general meeting for decision.

In accordance with the resolution passed at the last meeting of the committee the honorary secretary read a special address drawn up by a sub-committee for circulation among the Fellows of the College, inviting them to join the association and to take an active part in forwarding its objects.[1] The report was approved and unanimously accepted. Mr. R. B. Anderson, one of the honorary secretaries to Mr. Rivington's election committee, brought up a report to the Association of Fellows of the Royal College of Surgeons of England, on behalf of the representatives of the association, on Mr. Rivington's election committee. The report was approved and adopted.

Mr. Rivington reported that in accordance with the request of the committee conveyed to him at the last meeting he had given notice to the secretary of the College that he would move the resolution in favour of a grant from the Council to the appeal of the Privy Council on behalf of Mr. R. B. Anderson and had received an acknowledgement from the secretary.

Mr. Rivington then called the attention of the committee to the fact that no report of the proceedings of the association had been issued since 1892, and expressed his opinion that it would be very desirable to bring the account of those proceedings up to date and issue a copy of the report to members and others, more especially as there was some prospect of the subscription to the association being raised. He then moved the following resolution, which was seconded by Dr. Barnes and carried unanimously:—

"That a sub-committee consisting of the president, two vice-presidents, and honorary secretary, be appointed to draw up a report of the proceedings of the association from the date of the last report to the present time for transmission to the members of the association."

This concluded the business of the meeting, and the committee adjourned.

[1] The address will be found printed in full at page 126 of our present issue.

PRESENTATIONS TO MEDICAL MEN.—At a meeting held on the 21st ult., in the District Hospital, West Bromwich, Dr. A. P. Steavenson, until recently senior house surgeon to that institution, was presented by the honorary secretary, on behalf of the patients and officials, with a valuable case of surgical instruments.—Dr. R. W. Lethbridge has been the recipient of a handsome testimonial on his departure from Alexandria, Victoria, Australia.—On the 23rd ult., at a meeting in the Council Chamber at Luton, Mr. W. R. Phillips, J.P. (vice-president of the Bute Hospital), in the chair, Dr. David Thomson, on the occasion of his leaving the town, after many years' residence there, and specially in recognition of the great work he had done for the Cottage Hospital during eighteen and a half years, was presented by Mr. W. R. Phillips, on behalf of the subscribers, with a handsome gold keyless chronometer, which was thus inscribed: "Dr. David Thomson.—In remembrance of generous service at Bute Hospital, Luton, and other good work. December, 1896."—Presentations have been made to the following gentlemen, in acknowledgement of gratuitous instructions on First Aid—namely, to Mr. J. K. Goodall, L.R.C.P., L.R.C.S. Edin., of Brimington, a silver-mounted walking stick, from the members of the Midland Ambulance Class at Whittington; to Mr. W. Crooke, L.R.C.P. Lond., M.R.C.S. Eng., of Egremont, a beautifully inscribed barometer from the Ambulance Class in connexion with the Seacombe Technical Institute; to Dr. Llewellyn A. Morgan of Liverpool, a handsome teapot from the members of the Ambulance Class, recently organised, at the Central Station of Ambulance Work on the Cheshire Railway Lines; and to Dr. W. George Willoughby of Eastbourne a malacca cane walking stick, with ivory handle, and a silver band bearing the inscription, "Presented to Dr. Willoughby by the Eastbourne Borough Police Ambulance Class. 23rd Dec., 1896."

THE LANCET.

LONDON: SATURDAY, JANUARY 9, 1897.

THE elevation of Sir JOSEPH LISTER to the Peerage is an event to be regarded with unqualified satisfaction. Nothing is more noticeable than the universal approval which it has called forth from all quarters. The press of every party and shade of political feeling has been hearty in its praise of the creation of the new peer and so far from regretting the departure has pleaded for an even wider recognition of the claims of medicine. The fact is a very significant one and will go far to encourage our statesmen to be less timid in extending, or rather in using, the Royal prerogative to create peers at pleasure—a prerogative which has never been disputed. Though the unanimity of the press and of all parties in this matter is very gratifying it is satisfactory to notice that the new departure has been taken by a Conservative Minister—or, to speak more accurately, by the Conservative head of a Unionist Ministry. When the party taking such a step forwards is one which is supposed to stand on ancient ways, and one most apt to see the difficulties and the objections to innovations, there is the more assurance that the advance will not be retraced, but that with favouring circumstances it will be succeeded by others in the same direction. HER MAJESTY'S appreciation of the services which medicine has rendered to humanity is well known. Her loyal and constant confidence in those distinguished members of the profession by whom she has been faithfully served has been an example to the public. In the many anxious times of her history when she, and her people in sympathy with her, have been awaiting the issues of life and death she has ever known how to support her medical advisers by her trust and to reward them with her favour. We are quite sure, therefore, that when her responsible Ministers came to be of opinion that medicine should be honoured by a representative in the House of Lords they found no difficulty in getting HER MAJESTY'S gracious consent. That such a proposal should have been made by the Marquis of SALISBURY will enhance the satisfaction of Sir JOSEPH LISTER. His Lordship is not only at the head of a powerful Ministry, but his knowledge of science, and the fact that he has himself been President of the British Association for the Advancement of Science, increase the value and significance of a medical peerage granted upon his recommendation. Sir JOSEPH LISTER may well dwell on the fact of his progression in honours and the division of the credit of them between the two most conspicuous statesmen of the country. It was Mr. GLADSTONE who, under HER MAJESTY'S authority, conveyed to Sir JOSEPH LISTER the intimation of his baronetcy, and who did so with every expression of personal satisfaction. And now it is the Marquis of SALISBURY who, in full sympathy with the public opinion of Sir JOSEPH LISTER'S merits and his world-wide fame, calls him into that branch of the Legislature where his rare knowledge and foresight may serve to guide legislation in ways of safety on questions deeply affecting the health and happiness of the empire.

We have treated this action on the part of Lord SALISBURY and his Ministry so far from a purely public point of view, conceiving the admission of members of the medical profession into the House of Lords as an obvious advantage to the public and the House. There is a deep faith in the Second Chamber, which faith will be strengthened by the addition of men of commanding character and wisdom, who have not been called to it by the accident of birth. To Sir JOSEPH LISTER himself this elevation will bring strange associations and varied thoughts. He is too deeply absorbed in the great problems of modern medicine, which excite hopes beyond the dreams of our immediate predecessors, to be spoiled or dazzled with the conventional grandeur of his new position. But he may well be trusted to appreciate the honour to him and to his profession which it implies, as well as the responsibility. We do not expect him to develop any new ardour in party politics or even to hear of his frequent participation in debate. But for all that we expect him to be a power on occasion in defence and furtherance of the health and happiness of the people and, if need be, of the profession of which he is a most distinguished leader and ornament. To that profession at large the event is very pleasing. Had a *plébiscite* of all British medical men been taken for the nomination of one man the vote must have been unanimous in favour of Sir JOSEPH LISTER. He was one of the most careful of surgeons and one of the most successful. Whether his patient was a hospital patient or a private patient he had the same care for him. But beyond his solicitude for individual patients he was ever the scientific seeker after those truths the bringing to light of which resulted in the establishment of the antiseptic treatment, with its splendid results. For thirty years at least he has unceasingly pursued this end with a result in the saving of life comparable only to that effected by EDWARD JENNER.

In conclusion, we have only to say that our own gratification is complete. For years we have urged this step on successive Ministries as eminently indicated by the wants of the public and the importance of the profession. Very lately we even ventured to suggest both the step which Lord SALISBURY has so happily taken and the individual name which he has selected. We have waited long to see the realisation of our wishes and have been conscious sometimes of almost impatience; but this is not the time to complain. Lord SALISBURY has, indeed, made this year a notable one for medicine and infused fresh encouragement into the hearts of those who pursue it, and he will long enjoy the gratitude of the profession for a new and truly statesmanlike departure.

RATHER more than ten years ago[1] we drew the attention of readers of THE LANCET to the importance which thrust

[1] THE LANCET, July 17th, 1886, p. 143.

wounds of the orbit possess from the very great fatality which follows their infliction. The extreme thinness of the bones forming the roof and inner wall of the orbit makes penetration of the cranial cavity by a slight thrust from an umbrella, walking-stick, foil, pipe-stem, &c., easy of attainment, whilst the elasticity of the skin and orbital contents causes the wound of entrance to appear of far less consequence than it really is. We can find excuses for the surgeon of bygone days, who was chiefly dependent on the few cases of surgical interest which could be seen when walking the hospital of the period for the experience which was to guide him in future life and who could obtain but limited information from books. To-day the conditions of professional training and practice are quite changed. For years the medical press has been accumulating cases of the rarer diseases and injuries until almost all that can be known about them has been placed before the profession. At intervals we have considered it advisable to make a *résumé* of our knowledge on some subject and take thought of our position with regard to it. As regards the subject of which we are writing now no advance has, in our opinion, been made during the time which has passed since we last drew the attention of our readers to it. When investigating the subject a few years ago[2] we found the mortality from these injuries to be over 90 per cent., and we think this excessive mortality to be the result of the policy of non-intervention which was formerly the bane of abdominal surgery. If the surgeon is aware, as he should be, of the dangerous character of wounds inflicted by thrusts of the kind under consideration, harmless though they appear, he has no excuse for not treating the case in the same manner as he would treat a punctured fracture of any other part of the cranium with probable injury to the brain. Careful examination of the wound must be made, the track rendered as far as possible aseptic, foreign bodies and bone splinters removed, and adequate provision made for drainage. This need not involve the loss of the eye unless that organ has been irreparably injured by the instrument which caused the damage. Nor need the scar which must result from the operation cause much disfigurement; this must not, however, be allowed to weigh with the surgeon in the face of the great danger to life. "Waiting for symptoms" cannot be too strongly condemned in the light of our present knowledge; this course, which is so much the easier in the presence of a wound which is apparently of trifling extent, is almost invariably a fatal one. Sometimes, however, brain substance escapes from the wound and there is no doubt that the brain has been penetrated and severely injured. The indication is then clear, but not always followed. We know of two or three cases of thrust wound of the orbit which have been recently under treatment in hospitals in which it was decided to wait for symptoms; all proved fatal. As the late Mr. HULKE[3] wrote some years ago of the course of events after such injuries: "Of brain symptoms there may be none. Two or three days may pass over, during which the patient goes about as usual; then brain symptoms make their appearance, sometimes suddenly, and the patient dies in the course of a few hours or days, and the true nature of the case is revealed only by the post-mortem examination." The portion of brain usually injured is not very important in the carrying on of the ordinary cerebral functions, and the inflammatory mischief may be too extensive for repair when the symptoms which are supposed to justify interference are first noted; the surgeon may not find the abscess should there be one (as in a recently published case); or the fatal event may supervene too rapidly although the symptoms are delayed for a week. The cases of recovery to which we have access are not very numerous. Sir PRESCOTT HEWETT,[4] in his lectures on injuries to the head, mentioned two. The first was that of a boy aged four years who fell with a cheese knife in his hand. The point of the knife entered the orbit, and on its withdrawal, which required force, brain substance followed. He recovered and was well seventeen years afterwards. The second case is taken from MORGANI. A young man received a punctured wound in the left orbit, became paralysed on the same side, and had fits on the opposite side with aphasia and delirium. He then complained of pain in the right ear, and in three weeks there was discharge from the ear; after the cessation of the discharge he recovered. LAPLACE[5] had under his care a man who received the end of a foil in the left orbit. Coma with paralysis of the right side of the body and left side of the face rapidly ensued. The pulse rose to 140 and the temperature to 104·5°. On the fourteenth day the left temporal region was trephined; the dura mater was found to be congested; a platinum wire was passed to the cavernous sinus and about a drachm of blood clot removed. The trephine opening was plugged, and a tight bandage applied. He recovered, but with some anæsthesia around the orbit and internal squint. It was supposed that the foil had entered the sphenoidal fissure. HULKE[6] had a patient aged thirty-six years under his care, with the vulcanite mouth-piece of a pipe embedded in the orbit, who recovered; but it is not certain that the dura mater was wounded. BEAUMONT'S[7] case is historical. A man who was watching the firing of a rocket felt a sudden blow in the left eye. A piece of wood five and a half inches long, the transverse section of which was four-tenths of a square inch, was extracted with difficulty. A profuse gush of blood followed, but was arrested with the application of iced water. He suffered severe headache and vomiting for the first twenty-four hours, but was not rendered unconscious. He lost vision in the eye on that side and had anæsthesia in parts supplied by the infra-orbital nerve. Three years afterwards he was in good health, but had an impaired memory. Mr. A. F. HAWKINS[8] removed a piece of broken knitting-needle nearly three inches in length from the orbit of a child three years of age who had fallen on it. The child appeared somewhat dazed for a moment, but went on with her work. On the fourth morning there was paralysis of the left side, more marked in the upper than in the lower extremity. The end of the needle was about three-quarters of an inch from the puncture in the

[2] THE LANCET, July 4th, 1891, p. 15.
[3] A System of Surgery, vol. i., p. 585 (Holmes), third edition.
[4] Medical Times and Gazette, 1858, vol. i., p. 237. See also THE LANCET, 1857-8, vol. ii., p. 817.
[5] THE LANCET, Dec. 19th, 1891, p. 1405.
[6] THE LANCET, July 4th, 1891, p. 15.
[7] THE LANCET, June 14th, 1862, p. 626.
[8] THE LANCET, July 17th, 1886, p. 144.

skin. The paralysis continued for ten days after removal of the needle, then began to subside, and afterwards rapidly passed off. She was quite well a year later. Mr. GODLEE and Dr. POPE[9] had a patient under their care who had received a stab from the point of an umbrella in the left orbit. Much shock and vomiting followed. Later he had aphasia, epileptiform seizures, paralysis of the right side of the face and tongue, and somewhat irregular temperature. He recovered. A horse-hair drain was placed in the wound about the third day and replaced by a small drainage-tube on the eighth day, which was shortened on the thirteenth. The wound was twice explored and the question of trephining considered. POLAILLON'S[10] case was that of a boy aged eighteen years who had the point of an umbrella thrust through the roof of the orbit. He was found in a state of coma; the foreign body had been removed with difficulty. An incision was made in the forehead and a portion of the frontal bone chiselled away; the dura mater was incised and some blood and cerebro-spinal fluid escaped; five splinters and a portion of damaged brain-substance were removed and a small artery tied with catgut; the débris of the eyeball was enucleated and a drain passed from the frontal wound through into the orbit. The patient became conscious in a few hours and had no bad symptoms afterwards. Healing took place well and quickly. In THE LANCET of Jan. 2nd, p. 38, will be found the account of a case under the care of Mr. A. WINKFIELD, where the wound was carefully drained at first, and on the occurrence of symptoms at a later date trephining was resorted to with much benefit. HULM'S[11] statistics on the subject show the diminished mortality which follows surgical interference in all cases of foreign bodies in the brain when the surgeon operates at the present day and observes modern precautions.

THE increase of longevity is one of the main objects of all work in the field of preventive medicine, and the question "Is longevity increasing?" is only another form of the still more pertinent question—"Has the recent development of preventive medicine yielded any tangible results on the duration of human life?" At this season of the year industrious paragraphists in some of our lay contemporaries often exercise their ingenuity by tabulating the ages of persons whose deaths were announced in their obituary columns during the recently completed year. It may be interesting to some of the readers of a newspaper to learn, for instance, that during 1896 its obituary columns contained notices of 7743 deaths, 1141, or nearly 15 per cent., of which were of persons aged upwards of eighty years, and that 165 were deaths of nonagenarians. It is scarcely necessary, however, to point out the absolute futility of this class of statistics, even when we are further told the proportion of the announced deaths of octogenarians in a given newspaper in a series of years. A high proportion of deaths of aged persons may be due to the epidemic prevalence of influenza, or be the result of exceptionally severe weather, but this would not prevent this class of statistician from claiming it as evidence of so-called "longevity."

If we would seek an answer to the question "Is longevity increasing"? we must consult a very different class of statistics. The series of Life Tables published by the Registrar-General during the last fifty years clearly prove that the mean duration of life in England is steadily increasing and that this increase is an increasing rate of increase. During the thirty years 1841–70 the English death-rate was practically stationary at 22 per 1000; in other words, preventive medicine was only able in that period to counteract the deleterious effect of the constantly increasing aggregation to towns. Under the stimulating sanitary influence of the Public Health Acts of 1872 and 1875 the national death-rate fell in 1871–80 to 21 per 1000 and further to 19 per 1000 in the decennium 1881–90. The effect of this marked decline in the English death-rate is clearly shown by the three principal Life Tables published by the Registrar-General. For instance, the mean duration of the life of males, according to Dr. FARR'S Life Table, based upon the mortality statistics of the seventeen years 1838–54, was forty years; according to Dr. OGLE'S Table, based upon the ten years 1871–80, it had increased to forty-one years; and by Dr. TATHAM'S Table, based upon the more recent decennium 1881–90, it had further increased to nearly forty-four years. Thus the mean duration of life among males has increased under the influence of preventive medicine by four years during the past fifty years. The increase of longevity among females has been still greater. Thus the mean duration of life of females, which was not quite forty-two years by Dr. FARR'S Table, rose to nearly forty-five years by Dr. OGLE'S Table and to forty-seven years by Dr. TATHAM'S Table, showing a total increase of five years in the same period.

Some are inclined to depreciate the value of this increase of the mean duration of life in England in recent years, because it is mainly due to the reduction of mortality in childhood. It is indeed true that after middle life the expectation of life has not increased, and has, indeed, slightly declined. The effect of this is, however, far more than counterbalanced by the largely increased proportions of persons who survive childhood and reach middle life. Thus, as has been pointed out, there has been a very considerable increase in the proportional number of years lived by succeeding generations between the most useful age-period of from twenty to sixty years. This may clearly be claimed as one of the results of the labours of preventive medicine. It remains to be seen whether further sanitary progress will make it possible to entirely counteract the effect of the increasing intensity of competition and the struggle for existence and survival which undoubtedly are now depressing the expectation of life after middle age. If, therefore, longevity signifies mean duration of life there can be no doubt about its increase in England in recent years. If, however, by longevity is meant the chance of middle-aged persons reaching extreme old age, English Life Tables do not supply so satisfactory an answer to our question.

So far back as Oct. 17th, 1885, we referred in an annotation headed "A New Objection to taking Oath," to the possible risk of infection from kissing the Book when taking the oath in a court of law. Allusion was made in that

[9] THE LANCET, June 19th, 1886, p. 1158.
[10] Sajous: Annual of the Universal Medical Sciences, vol. iii., A38.
[11] University Medical Magazine, Philadelphia, 1892, vol. i.

annotation to the circumstance that a medical man, Mr. STRATHEM of Middlesbrough, on being summoned to give evidence in a case of drunkenness objected to swear on the Testament, not for the ordinary reason, but on account of the risk of infection. The objection astounded the legal authorities, who ruled that it was not a conscientious objection within the meaning of the Act. The witness at length swore under protest. Remarking on these facts it was observed at the time that "it must be allowed that there is something in the objection." In the following year we published a letter from Dr. HARKNESS of Derby complaining that when giving evidence in the Divorce Court he had been required to kiss the same book which had just previously been handled and kissed by two common prostitutes. His objection to do so on the very possible, not to say probable, grounds of infection afforded much amusement to the late Mr. Justice BUTT and some members of the Bar present, while other members supported the witness in his very reasonable objection. Ultimately, at the suggestion of the learned judge, Dr. HARKNESS kissed the open Book, though, as he urged in his letter, this did not prevent his handling an unclean thing. Many more letters, annotations, and articles too numerous even to summarise followed, and then the Oaths Act, better known, perhaps, as Bradlaugh's Act, was passed. This Act, as is well known, relieved all persons who, like its author, had no religious belief from taking an oath, permitting an affirmation instead of it. It continued to relieve also from the necessity of taking an oath those to whose religious belief it was contrary. It also contained a section (the fifth) which has already become memorable and promises to become more so. This section permitted any person to whom an oath is administered who desired to do so to swear with uplifted hand in the form and manner in which an oath is usually administered in Scotland. When this section became known to us, we used every effort to make it known to our readers and to induce them to take advantage of it. Here a serious difficulty occurred. Though the Act had for some time become law its fifth section was wholly unknown to many of those whose duty it wa to have had it at their fingers' ends—legal coroners, stipendiary magistrates, judges of county courts, recorders, registrars, and magistrates' clerks. Medical witnesses on claiming their rights under this section were treated not only illegally by being asked questions clearly contrary to the words of the section, but were also treated with rudeness and incivility. Indeed, such was the prevailing ignorance that Mr. ASQUITH, then Home Secretary, was moved to issue a circular to all coroners' and magistrates' clerks, calling their attention to the section and its provisions. Even this did not prevent some magistrates from acting illegally, as duly recorded in our pages. Fortunately a change for the better is at hand. The *Times* in its issue of last Saturday published a letter from Mr. FRANCIS A. STRINGER, of the High Court of Justice, author of "Oaths and Affirmations," and an undoubted authority in all that relates to the oath. In this letter he, with a courage and boldness much to his credit, condemns the English form of oath as liable to spread syphilis. He gives the forms in use in France, Belgium, Austria, Spain, and Italy and shows that kissing the Book is unknown in any of these countries. He also shows that the Scotch form, like the French, is much more solemn than the English one, and that though anyone may take it, not one witness in a thousand knows of the existence of the section of the Act which permits it. Consequently the uncleanly English oath remains in general use, for unless a witness asks to be sworn in the Scotch form the usher has no choice but to administer the usual English one. Mr. STRINGER concludes a most able letter by suggesting the bringing in a Bill to provide a short simple form of oath similar to that of Scotland and so making it uniform in the United Kingdom. The *Times* of Monday had an excellent leading article supporting Mr. STRINGER'S views and condemning the English form of oath on all grounds. What will, we trust, prove to be the beginning of a most interesting correspondence has commenced in the columns of our contemporary, and will, it is to be hoped, aid in the reform for which we have so long contended.

Annotations.

"Ne quid nimis."

NEW YEAR HONOURS TO THE MEDICAL PROFESSION.

THE New Year has brought to the medical profession, in the person of Sir Joseph Lister, the honour of a peerage. This is a departure in the bestowal of titles which all will welcome—and welcome not only because of the spirit which has suggested the offer of nobility to Sir Joseph Lister, but because of the undoubted deserts of the recipient. We make further reference to this grateful topic in a leading article. Dr. Richard Douglas Powell has received the honour of a baronetcy. Dr. Powell has for many years been a leader in the profession. He is physician to the Middlesex Hospital, consulting physician to the Brompton Hospital, and author of an excellent book on pulmonary disease. He is Senior Physician Extraordinary to Her Majesty the Queen and his well-merited title was expected for him by all his friends. Mr. William Raymond Kynsey, C.M.G., receives the honour of a knighthood. The Hon. Sir William Raymond Kynsey, a retired surgeon-captain in the army, is a member of the Legislative Council of Ceylon and Inspector-General of Hospitals and Asylums in the island. Deputy-Surgeon-General Charles Benjamin Mosse, C.B., receives a Companionship of the Order of St. Michael and St. George. The new C.M.G. is the superintending medical officer of Jamaica.

THE FIGURES OF THE MEDICAL PROFESSION.

THE Medical Directory for 1897 shows the numbers of the profession to have again increased, as they have done steadily for the last decade. This time the number of names included is greater by 958 than it was last year, the increase being the largest but one that has ever occurred in the course of one year. The exception occurred in 1894, when the number of practitioners was greater by 1062 than the number in 1893. The increase is fairly distributed between town and country and between the respective countries of the United Kingdom. The London list has gone up from 5835 to 5992; the provincial list for England from 14,702 to 15,081; the list for Wales from 1028 to 1062; the list for Scotland from 3264 to 3369; and the

list for Ireland from 2563 to 2598. There are in the 1897 list 3652 names of registered practitioners resident abroad, as against 3453 names in the 1896 list; and 2510 names of officers in the Naval, Military, and Indian Medical services as against 2451. The totals, 20 being added to the present year and 24 to the past year under the heading "Too Late List" are as follows: 1896, 33,328; 1897, 34,284. The following averages are not calculated out to decimals. In the English provinces there is 1 medical man to every 1700 of the population. In London the proportion of medical men is about double as high. In Liverpool and Manchester, on the other hand, there is 1 medical man to every 1200 of the population, and this proportion prevails for the whole of Scotland. In Edinburgh, however, the proportion rises to 1 medical man to 500 of the population, while Glasgow, like London, possesses 1 medical man to every 850 or so of its laymen. In Ireland there is 1 medical man to every 1800 of the population, the medical men in Dublin amounting to about 1 in 600 of the population. In Wales there is 1 medical man to every 1500 of the population. The Directory is, as usual, an admirably edited and invaluable book of reference, doing credit to its well-known publishers, Messrs. J. and A. Churchill.

ARMY EXAMINATIONS.

WITH the exception of an occasional, and all too rare, promotion from the ranks the commissioned officers of the Army are selected by competitive examination in a great number of more or less abstruse subjects, and according to recent writers in the daily and weekly press—notably the *Broad Arrow* and the *Morning Post*—the consequence has been the alarming evolution of the crammer. The general tenor of the correspondence is unfavourable to the existing system. Most of the writers over such signatures as "A Retired Officer," "A Father of a Family," and so forth, contend that the brains of the candidates are unduly stimulated at the expense of their bodies, the result being a parcel of etiolated doctrinaires, admirable possibly as theorisers, but totally unfitted for the duty of leading men in action and controlling them in time of peace. "If there must be competition for the Army, as there is in every other profession," says the writer of a forcible letter in the *Morning Post*, "let it be in professional subjects as is the case in every other calling. First, let the lads who choose the army as a profession have the all-round education of gentlemen at their backs, including running, jumping, cricket, football, and all the English sports which are compulsory so long as they remain at school. Appeal to the colonels of regiments, to the parents of boys at school, to the public school masters, and to the boys themselves, and you will quickly ascertain which they would vote for, school and discipline or cramming, London music-halls, seaside watering-places, cigarettes, and late hours." There is much food for reflection in the above extract, and, indeed, the whole letter is worthy of the attention of the Civil Service Commissioners. The alleged enormous expense of the cramming process is another fruitful source of complaint, and that it must in reality be unduly expensive the lavish use of the advertising columns in many of our contemporaries goes far to prove. When the purchase system was abolished the idea was to throw open the army to all educated and well-behaved young men, whether they were possessed of means or not, but apparently the cost of a commission is indirectly just as prohibitive now as ever it was. Hundreds of fine, able-bodied youths, full of military aspirations and admirably constituted by nature for the exercise of command, are said to be rejected because their friends cannot afford the costly preparation necessary to ensure success, among them being many scions of military families, who are thus debarred from following in their fathers' footsteps. These in every respect unexceptionable candidates fail to score as many marks as their crammed competitors, but, on the other hand, the latter obtain credit for subjects which they have in no wise mastered. Thanks to the skill of their instructors, these forced pupils are enabled to retain temporarily in their memories a certain number of formulæ and answers to probable questions, but no sooner is the ordeal surmounted than at once their ephemeral learning begins to evaporate. From a purely sanitary point of view there is not a good word to be said for the system of cramming. A brain, like a stomach, requires food, but it must be judiciously administered in moderate quantity and at suitable intervals. A *pot-pourri* of indigestible matter poured well-nigh continuously into an immature brain, even during a period measurable by weeks, cannot possibly be assimilated, and must inevitably exercise an injurious effect on the over-stimulated organ. An officer above all things should be endowed with unfailing endurance, so that he may continue to lead and direct his men to the last. A system of education which over-stimulates the brain while neglecting the still unformed body can only be characterised as intrinsically bad. In this connexion it is impossible to improve on the concluding sentence of the letter from which we have quoted: "Let the qualifications be ample; only do leave our boys at school till they are grown up."

THE DANGERS OF ARTIFICIAL TEETH.

ON Dec. 28th an inquest was held at St. Bartholomew's Hospital with reference to the death of a patient from hæmorrhage caused by an artificial denture which had been swallowed some eight or nine months previously during a fainting fit. The patient was at the time seen by a medical man who, being unable to remove the denture by the mouth, forced it down towards the stomach presumably with the hope that it would be passed per rectum. Death from swallowing artificial teeth is more common than is generally supposed, and many cases are to be found recorded in the various journals devoted to dental practice. Artificial teeth properly fitted and secured are in themselves quite free from danger, and it is only when people persist in wearing small, loosely fitting dentures that trouble is likely to arise, as a fit of coughing or fainting or even drinking may dislodge them and so allow them to be swallowed. Should such an accident occur prompt treatment is necessary and if it is found impossible to remove the denture by the mouth or it fails to pass per rectum œsophagotomy or gastrostomy should be performed, for if the plate be allowed to remain ulceration and hæmorrhage are certain sooner or later to supervene, leading invariably to a fatal result.

HOSPITAL REFORM.

OUR hope that the discussion of this subject in the lay press would bring out the principal facts in the case and with them the sympathy and support of our lay contemporaries is being fulfilled more quickly even than we thought. In the *Times* of Saturday is a leading article expressing hearty satisfaction on the elevation to the Peerage of Sir Joseph Lister. The writer goes on to show that the fortunes of the profession have been much injured by the very labours of medical men which, in a degree unparalleled in any other calling, have tended to diminish the amount of demand for their own services. The article then proceeds to deal with the question of hospital reform and practically admits everything which the labours of our Special Commissioner and the efforts of hospital reformers have brought to light. There is a generous admission of the fact that the reformers have no intention of injuring hospitals so far as the relief of deserving cases goes. "Nothing is more curious," says the *Times*, almost paraphrasing our own words, "than the way in which

persons who would be ashamed either to ask for charity in any other form or to receive it feel no compunction in entering a hospital where their board and lodging are paid for by the subscribers." The out-patient abuse is stated with equal clearness. "Of the out-patients a considerable number are people earning good wages." The demoralising effect on the unfit patients is well brought out: "the first visit leads to subsequent ones, until at last the very notion that it is part of their duty to provide themselves with medical attendance seems to drop out of their consciousness." One deep root of the evil is shown to be in the rivalry of the hospitals to show numbers and in the desperate struggle for existence. The special hospitals are proved, by the very nature of their origin, to be special sinners. The article ends by approving of the formation of a central board as advocated by the Lords' Committee and the Charity Organisation Society. The letters published in the papers equally support the contention of reformers. "One who has been driven to the Hospitals" writes in the *Times* that the increase of consultants' fees is a great factor. But there are younger consultants whose fees would be quite practicable to such patients who have no business in hospitals and who take up beds which are meant for the poor.

WHAT CONSTITUTES PLAGUE?

THE highly interesting paper on the spread of plague, by Dr. Cantlie, read recently before the Epidemiological Society of London, which was partly reproduced in our columns last week and which is completed in our present issue, raises, together with the discussion which followed it, some important points. From an epidemiological standpoint the more practically important question is as to what is the precise nature of certain glandular swellings, with or without fever, which there is evidence to show are at times not uncommon, when what is recognised as true plague is prevailing, but as to the nature of which there is much difference of opinion. Dr. Cantlie's mental attitude towards the question is clearly an open one, but he has obviously been much impressed by the recent news from Calcutta of the discovery of a bacillus strongly resembling that of plague in cases to which the name of "pestis ambulans" is given by some, and he referred also to certain peculiar glandular swellings, whether of the groin, armpit, or neck, which were noticed among persons at Hong-Kong and elsewhere, but which were, it appears, never accurately diagnosed. By some observers, however, certain of these glandular swellings have been regarded as being venereal in character, but it is not at all clear from the evidence forthcoming whether the glandular swellings in question may not have been of more than one sort; that, in fact, there is truth in all the observations. Dr. Manson, for instance, pointed out that in the East non-venereal buboes are very common, and he raised the question whether possibly "river fever," which is frequently accompanied by buboes, might not turn out to be a phase of "pestis minor." It is clear that if during certain prevalences of plague there exist glandular swellings which are not regarded as due to the poison of plague, but which, for aught we know to the contrary, may be potent for infection, the preventive measures with regard to the disease will have to be much extended. That there should occur during epidemics of plague a number of more or less anomalous cases is what, upon general epidemiological principles, is, perhaps, to be expected. A similar condition of affairs is frequently observed in epidemics of diphtheria, scarlet fever, typhus fever, and enteric fever. The question is certainly one of great practical importance, as may be inferred from the fact that the exodus from Bombay has now amounted to between 100,000 and 150,000 persons. Dr. Lowson's valuable observations as to the bacteriology of the disease were very full and suggestive, and he threw much doubt upon the discovery of the true plague bacillus in the soil of Hong-Kong as also upon the value of certain methods of treatment. His experiences with regard to the inoculation of pigeons with plague bacillus were somewhat reassuring, as if, as has been stated, these animals can act as the winged messengers of plague it would be necessary to limit their movements as far as practicable. The question of the infection of rodents is one upon which more light is needed, as it seems doubtful whether rats are, as has been believed, infected prior to the human species or whether only the incubation period in rats is shorter than in man. In this connexion Dr. Cantlie's observations as to the similarity in geographical distribution between plague and a certain sub-family of rats seem to call for further investigation. The question raised by Dr. Lowson as to the presence of plague at Singapore is one which may have a very material bearing on the spread of the disease eastward.

AN INTERNATIONAL JOURNAL.

WE notice elsewhere the contents of the first issues of a new literary venture of a peculiarly attractive and interesting nature, for which we hope much practical support will be given by the medical profession in this country. We refer to the revival of the periodical *Janus*, which in the Fifties obtained a notable position from the character of its contributions and the eminence of those who wrote in it. That it did not then obtain a permanent footing is, perhaps, explicable on the ground that its subject-matter—that dealing with the history of medicine—failed to attract a sufficiently large circle of readers. At the present time, when students of medical literature have so vastly increased in number, we may hope that no such drawback will be found to exist. The editor of the new series of *Janus* is Dr. H. F. A. Peypers of Amsterdam, and the basis on which the journal is established is strictly international. Amongst the names of those in this country who have coöperated in its foundation are Sir Joseph Fayrer, Dr. J. F. Payne, Dr. C. Creighton, and Dr. A. Davidson. It must not be supposed that it is intended to limit the scope of the journal to matters of purely archaic interest, for it is expressly stated that medical geography as well as history will be represented in its pages. Thus there should be found in this review articles written in all parts of the world concerning the distribution and character of endemic diseases that may be of great value. As we have indicated, the numbers already issued augur well of the success which should attend an enterprise that ought to stimulate and extend the study of questions in which all medical men cannot fail to feel an interest.

SUFFOCATION IN A WELL.

A FATAL case of asphyxia has occurred at the waterworks of the Hastings Corporation at Brede. The well, which had been sunk for two years, was sixty feet deep and was lined with iron cylinders for twenty feet, with brick-work for the remaining forty feet. There were fourteen feet of water, and the well was left open, but was under a shed. At a depth of seventeen feet one of the workmen named Williams, was suddenly overcome and fell into the water. Another man followed to help him and got down about forty feet when he was overcome and was hauled up by the feet unconscious. Suspecting foul air, the men sent to Hastings for a fan and then got the body out. Men who had been in the well "hundreds of times" said they had never before known foul air to be in it. It was usual to let a lighted candle down to test the air, but on this occasion this small formality had apparently been omitted until after the catastrophe, when it was repeatedly extinguished at a depth of twenty feet. The man Britt, who went to the rescue, said he smelt "damp air" about thirty or forty feet down,

and feeling "very funny" was about to call to be pulled up when he suddenly lost consciousness. The medical evidence pointed to death by drowning with evidences of carbonic acid poisoning, and the jury, being satisfied with the precautions that were taken and of opinion that the gas had suddenly been generated, returned the usual verdict. To this verdict should have been added, we consider, the rider that the simple precaution of testing the air of deep wells and similar places by means of a lighted candle should never be omitted, and it is the duty of those authorities connected with such undertakings to insist upon this test being applied before a descent is made. We are not inclined to accept the theory of sudden generation. At any rate such an occurrence is rare. The gradual accumulation of carbonic acid gas in wells situated in chalky districts is, on the other hand, a not uncommon event. We think in the present instance some further inquiry should have been made as to why on this particular occasion the simple but, as it often proves, life-saving test was neglected.

HENOCH'S PURPURA.

IN a recent number of *Pediatrics* an interesting paper by Dr. G. A. Sutherland appears, dealing with this curious and somewhat unusual disease and giving particulars of three cases of what he considers to be the same condition which have come under his own observation. The first was that of a male child aged three years and nine months, who had had, three months before his admission to hospital, a rash which had been supposed to be measles. Ever since he had been dull and languid with occasional pain in the stomach, and a month after the first rash appeared he began to suffer from sickness after food and a rash came out on his arms and legs, which had disappeared and appeared several times afterwards. A few days before admission he had become drowsy and had complained of abdominal pain. He had also vomited some chocolate-coloured material and passed bright red blood per rectum. There was nothing important or significant in his previous health or in the nature of his food, and on admission he was well nourished and of good colour. There was an eruption on his arms, feet, and legs, and a few spots on his back, buttocks, and abdomen. The gums were healthy, and physical examination revealed nothing abnormal except pain on pressure over the abdomen. During his four and a half months' stay in hospital hæmorrhages on the skin appeared abruptly on several occasions—twenty-five in all. The spots did not disappear on pressure; they were small and sharply defined, sometimes not elevated, but sometimes papular. They were not irritable, and although the eruption was wide-spread and general the parts chiefly affected were the extensor surfaces of the arms, the buttocks, the front of the legs, and the dorsa of the feet. There were, also, on eleven different occasions attacks of severe abdominal pain accompanied or followed by vomiting of blood-stained matter or the passage of blood from the bowel. The urine contained albumin and sometimes blood, and hyaline and blood-casts were present in great number. One curious point is that the knee-jerks were not obtained during the first seven weeks of his stay in hospital. He was seen two months after his discharge and had remained free from abdominal pain or hæmorrhagic outbreaks. The second case was that of a girl aged seven years, and the clinical history was characterised by attacks of abdominal pain, with vomiting of blood, melæna, bleeding from the nose and gums, together with repeated outbreaks of purpuric eruption, chiefly on the arms and legs, and albuminuria and hæmaturia. In this case also the knee-jerks were not obtained. She was in hospital for three months and was discharged recovered. She relapsed, however, two months later, and developed symptoms of intussusception with suppurative peritonitis, of which she ultimately died. Dr. Sutherland offers as an explanation of the final accident in this case that advanced by Werlhoff in reference to a similar case—viz., that there had been a hæmorrhage into the wall of the intestine causing paralysis of that part and increased muscular contraction in the adjoining part, leading to invagination of this into the paralysed and hæmorrhagic part. The condition found post mortem agreed with such a view, but nothing was found to throw any light upon the occurrence of the hæmorrhagic eruption of the skin. A third case, similar in many ways, is also detailed. The patient was a girl aged ten years, who had attacks of abdominal pain, sickness, epistaxis, and melæna, with purpuric skin eruption and the presence of blood and albumin in the urine. She also had articular pain and swelling, but she recovered. Dr. Sutherland, in conclusion, sums up the chief characteristics of this disease and points out the differences between it and other forms of purpura. The paper altogether is interesting, and it is embellished with two beautiful illustrations from photographs which show the character and distribution of the eruption in a very satisfactory manner.

THE FLANNEL SHIRT CLUB.

HOSPITAL patients who are sufficiently recovered to be discharged are only too often sensible of a painful contrast between the warm clothing to which they have become accustomed and the scanty habiliments resumed at the time of their return home. A Flannel Shirt Club has, therefore, been formed by an association of ladies, of whom the Countess of Strafford is president, its object being to supply good flannel shirts to needy male patients when they are discharged from London hospitals and infirmaries. Mrs. H. H. Clutton, the honorary treasurer, will receive and acknowledge subscriptions and donations of money sent to her at No. 2, Portland-place, W. All shirts and materials should be sent to the honorary secretary, Miss Lamport, No. 52, St. John's-wood-road, N.W., from whom information and forms of membership may also be obtained. The particular form of charity which this association will dispense is obviously both judicious and philanthropic.

INFANTILE PARALYSIS.

IN the last number of the *Neurologisches Centralblatt* an abstract of a very interesting paper by Professor Medin is given, the original having appeared in a Swedish paper. In an epidemic in Stockholm in 1887 the writer had collected 43 cases, and between 1888 and 1894 29 sporadic cases, and again in an epidemic in 1895 21 cases. The immediate cause of the disease he believes to be a poison, but infection from one patient to another, although possible, is very rare. No particular conditions can be regarded as predisposing, although children under four years of age seem to be most affected, and both epidemics occurred in late summer. Most cases began with fever and sickness, pain and sensitiveness of the body, rarely convulsions, but occasionally sighing and crying out. Of 50 cases, the legs were affected in 45, the arms in 14, and in 4 cases the face or the external rectus or muscles supplied by the third nerve were affected. Six cases of acute polyneuritis were observed in the 1887 epidemic, but only two in that of 1895. In that disease the onset was sudden, with high temperature, and the pain was severe; sometimes there was cutaneous hyperæsthesia, and in one case this followed anæsthesia in the lower limbs. Poliomyelitis affecting the nuclei in the bulb and pons was found in several cases and a lesion in the cells in

this region was in several cases demonstrated, practically identical with that of the anterior horn cells. Professor Medin has also seen polio-encephalitis occur in the same epidemic, indicating an apparent identity of the poisons of the two diseases. The prognosis is worst if the lumbar cord is affected, less if the cervical is the part affected, and is more favourable in polyneuritis than in polio-myelitis. The conditions found post mortem were the signs of general infection proceeding from bloodvessels and causing acute inflammation in the anterior horn, with consequent degeneration of the ganglion cells and of the nerve fibres. Professor Medin regards the disease as an independent and peculiar one and separates from infantile paralysis all paralytic conditions which occur in association with other infective processes.

GLOUCESTER AND THE NATIONAL MEMORIAL TO JENNER.

WHILE the exact form of national memorial to Jenner is yet undetermined it is proper to remember that the Jenner Society of Gloucester has been in the field as a local society for purposes similar to those of the committee in London now organising a national movement. Gloucestershire has a peculiar place in this question. It was in Gloucestershire that Jenner's immortal discovery was made and confirmed. Alas, it was in Gloucester itself that the light of Jenner's discovery went out almost completely, with the result that hundreds died during last year for want of vaccination, but with the effect of scaring the survivors into a rush to the vaccination stations. A society of enlightened citizens of Gloucester, calling themselves the Jenner Society for promoting the honour of Jenner and a knowledge of the real truth about vaccination, was formed at an early stage of the epidemic which has so terribly afflicted Gloucester. Dr. Bond, the honorary secretary of this society, has forwarded to us a printed statement of the objects of the society and especially of its plans for circulating sound and instructive literature on the subject. We sincerely hope that the London Committee for the national memorial will consider the claims of this society to affiliation and will apportion a grant from its funds for the literary defence of vaccination as provided for in the publications issued by the Jenner Society.

THE PLAGUE AT BOMBAY.

AS regards the epidemic of bubonic plague at Bombay it is always difficult to ascertain the figures representing the exact prevalence of the disease at any given time, but there does not seem to be any doubt that the state of affairs in Bombay is very serious. The Government returns are reliable as far as they go, but they do not usually afford the latest information, for which we have frequently to depend upon telegraphic intelligence from other sources. There has been an enormous exodus of the population from Bombay, and it is still going on; business is temporarily paralysed and more or less panic prevails among the native population. The total number of cases of plague returned to the end of December last amounted to 2430, with 1735 deaths; and during the first two days of the present year 130 fresh cases occurred, of which 120 are stated to have proved fatal. The general death-rate of Bombay is also excessive; nearly 1000 of the deaths that occurred during the last week of 1896 were attributable to the various kinds of fevers and 90 to bubonic plague. Altogether, 11 Europeans are stated to have been attacked since the outbreak, 2 of whom had died, and there were, according to the Central News Agency, 3 Europeans in hospital on Dec. 31st suffering from the disease. Cases of plague have, as we said last week, likewise been reported as having occurred at Karachi and Poona. At the former place the disease is stated to be assuming a very virulent form. Surgeon-Major Robert Manser, who held the post of senior physician to the principal native hospital in Bombay, is, we regret to say, reported to have died from plague on the morning of the 6th inst. The health of Calcutta, according to the latest intelligence that has reached us, seems to be fairly satisfactory, but the news from Bombay is rather alarming. It is stated that at Karachi the plague is taking an extremely virulent form, and that the panic in Bombay is increasing. Surgeon-Major-General Cleghorn, Director-General of the Medical Service, has left Calcutta for Bombay to report upon the plague. We print in another column (p. 131) a very interesting account sent us by an eye-witness in Bombay.

PUBLIC HEALTH AT MONTREUX AND TERRITET.

THOSE of our readers who may have friends residing at Montreux and Territet will welcome the announcement that the rumours as to the existence of typhoid fever in that well-known health resort are quite unfounded. Our information is derived from a most trustworthy source and refers not only to the town itself but to the surrounding district. Last year there was an epidemic of very mild scarlet fever, in the course of which there was only one death, and not a single case has occurred since last spring. The water-supply is of the purest description, being derived from Les Avants. The water reaches Montreux under a pressure of about six atmospheres, and there are no cisterns in the town the service being constant.

STREET NOISES.

THE agitation against totally unnecessary noises is slowly growing and we begin to see some likelihood of, if not relief, at any rate legislation towards that desirable end. The Parliamentary and General Purposes Committee of the Islington Vestry have approved of the adoption in London of a by-law suggested by the Home Secretary. This by-law, which is most admirable, is in force in various provincial towns and runs as follows:—

"No person shall, for the purpose of hawking, selling, or distributing any newspaper or other article, shout or use any bell, gong, or noisy instrument in such a manner as to cause nuisance or annoyance to the residents or passengers."

The County Council are we believe considering the subject as well, so we have hopes that even if we cannot

"Forget six counties overhung with smoke
* * * * * *
Forget the spreading of the hideous town"

the said town may be made less hideous by the silencing of the demon "winner" shouter, the even more offensive fog-horn voiced ruffians who howl in pairs, and the snuffly infant who comes out on Sundays.

HÆMORRHAGIC PANCREATITIS IN AN INFANT.

MCPHEDRAN[1] records what he claims to be the only case in an infant of this rare disease. Of all previous cases the youngest was twenty years of age and the majority about forty-five years. The patient was a male infant, in good health, with a tendency to constipation. In the ninth month the mother became pregnant, and he failed slightly in general condition. Weaning was attempted and peptonised milk given. He vomited and refused everything but the breast. Therefore the attempt was abandoned. On resuming suckling he vomited profusely, became prostrate, and was attacked with colic. On the next day he was in great distress and pallid. All attempts to give nourishment were followed by vomiting. He was constipated, and calomel followed by repeated doses of fluid magnesia failed to produce effect. Only a smal green motion, chiefly mucus, was passed. The abdomen was slightly distended. In the region of the ascending colon was an elongated mass about the size of the middle finger,

[1] Canadian Practitioner, September, 1896.

extending from the costal margin to the iliac crest. It was firm, dull, and moved with respiration. Intussusception was suspected and laparotomy performed. The mass was found to be an accessory lobe of the liver. The intestines and peritoneum were healthy. Death occurred next morning. Only partial necropsy was allowed, which took place forty hours after death. The middle third of the pancreas and its immediate surroundings were found deeply infiltrated with blood. Microscopic examination disclosed nothing more, as the organ was so much decomposed. Bacteriological examination showed the presence of only one form, a bacillus resembling those of the proteus group. The bacillus coli communis was carefully sought for.

MEDICAL STRIKE IN PARIS.

THERE is a "doctors' strike" in Paris which opens out the whole question of fees for attending the poor and indigent. The Prefecture of Police had established what was called a night medical service, and certain practitioners appointed for this purpose were to hold themselves ready to go out at night whenever called upon for some emergency. As this service was to be rendered only to poor people the medical officers were to receive a fee of 10 francs from the municipality. The authorities, however, did not calculate on the great number of poor who dwell in Paris and on the frequency with which these emergencies arise. Thus it has been found that these 10 franc fees amount in all to a very large sum, and the Prefect proposes to replace them by a regular income. This has been fixed at 600 francs, or £24, per annum, a sum which is quite sufficient for the medical men who live in wealthy districts, where there are not many poor people who would require their services. In the eleventh arrondissement, however, this would reduce the medical fee from 10 francs to an average of 3 francs and the four medical officers of this district have given in their resignations rather than submit to be constantly called out at night for a fee which is little less than half-a-crown. The Prefect laughs at this strike, for he thinks that for one medical man who resigns there are scores of others who will only be too glad to take up the position. It remains to be seen, however, what the Paris Medical Syndicate, with its 600 members and its seventy provincial branches, will have to say on the matter. Perhaps, in spite of this syndicate, the medical men will be defeated; but, whether they win or lose, the incident will in any case teach them the value of organisation.

THE CAUSES OF APPENDICITIS.

SOME points of interest in connexion with the pathogeny of appendicitis were discussed at a recent meeting of the French Société de Chirurgie. The view of M. Dieulafoy, that the disease is a consequence of constriction with closure of the appendix and the consequent retention of morbid material within it, did not find much favour. On the contrary, several speakers referred to the frequent existence of this condition without appendicitis, and at the same time mentioned cases in which they had found a perfectly permeable appendix to be the seat of inflammation. The general opinion of those who took part in the discussion was that appendicitis is usually only the local expression of a more or less general enterocolitis. The theory of M. Reclus is worth quoting as a more detailed statement of these opinions. According to him the problem of causation is capable of a double solution—(1) as being related to the presence of an actual foreign body in the appendix, a condition of course hostile to spontaneous recovery, and (2) as explained by a "theory of stagnation." This view regards the appendix and in a less degree the cæcum as diverticula which readily allow the accumulation within them of organic fluids, these in turn becoming the seat of fermentative changes. Inflammation follows as a natural consequence. In this comprehensive and moderate statement we shall probably find the nearest approach to explanation of a malady the clinical aspect of which is, as a rule, sufficiently obscure.

"THE LANCET" RELIEF FUND.

THE "Application Form" of THE LANCET Relief Fund will be found in our present issue, and can be readily detached should occasion arise for its use. We again take the opportunity of asking those of our readers who may have occasion to employ the form or to sign one of the required accompanying certificates to carefully note the conditions on which applicants become entitled to a participation in the benefits of the Fund. All applications should be made to the Secretary, Mr. Edward Davies, THE LANCET Offices, 423, Strand, London.

A NEW THEORY OF CANCER.

A CORRESPONDENT sends us a pamphlet printed at Glasgow entitled, "A New Theory of Cancer, with its probable Cause and Cure; or, the Answer to a Twelve Years' Prayer." This effusion, which is, we believe, written by Mr. Coyle, L.F.P.S. Glasg., is a compound of some medical knowledge intermixed with passages of the sort of stuff we find in "Dreams" or "The Book of Mormon." As Mr. Coyle is, we fancy, the defendant in an action in which the statements contained in the pamphlet in question are to be brought forward we must at present refrain from any further comment.

DEATH FOLLOWING VACCINATION.

THE *post hoc ergo propter hoc* fallacy has never been more abundantly exemplified than in alleged deaths from vaccination. Again and again inquiry has shown that the real cause of the death of an infant has not the remotest connexion with a vaccination which has been performed at a date more or less approximate to the fatal illness. On the other hand, it is well to recognise that injuries are caused by vaccination, and that this operation, trivial as it may appear, should never be undertaken in a weakly subject or without every safeguard. A case was recently investigated by a coroner's jury at Southampton where a child five months of age died on Dec. 21st after a brief illness from what the medical evidence showed was septic poisoning. The infant had been vaccinated on Dec. 9th, having six weeks previously suffered from bronchitis. There was no inflammation of the arm, but the site of vaccination became discoloured, and the medical witness who made the post-mortem examination considered that this was the cause of the septicæmia. We are bound to say that there is very little evidence to support this theory, especially as there was proof of exposure to inhalation of sewer air.

RAPIDLY GROWING OVARIAN CYST.

A POINT of great interest in the case of ovarian cyst detailed by Mr. Butler-Smythe in another column is the evidence which it affords as to the rapid growth of an ovarian cyst. At the earlier operation the right ovary was taken into the hand and carefully examined and nothing was then seen to be wrong with it; and fourteen months later, when the patient was confined, the ovary was still apparently normal, for though a small cyst might easily have escaped notice unless the abdomen had been specially examined, yet a large cyst could not possibly have been overlooked. About ten weeks after this the tumour had attained a size sufficient to hold thirty pints of fluid. We are so little acquainted with the laws governing the secretion of liquid in cystic tumours that we are utterly unable to say why in one case a cyst may be several years in reaching this size, and in another, such as the

one reported in another column, the whole process has not lasted more than a few weeks. Undoubtedly the rapid diminution of abdominal pressure occurring after labour may be credited with some influence. Another point worthy of note is the tendency seen in this case and observed in so many others for both ovaries to become cystic successively. The removal of a cystic tumour of one ovary appears to have some influence in determining the cystic degeneration in the other. Probably the effect is only apparent, the correct explanation being that both ovaries have the tendency to become cystic, but do not manifest this tendency synchronously.

DANGEROUS SOMNAMBULISM.

A SENSATIONAL case of somnambulism is reported from Brussels, which happily ended without any disastrous results. The individual concerned was a pupil in one of the religious educational establishments of that city. In the middle of the night he was found walking about clad only in his sleeping garments, and on being followed he was seen to have a large kitchen knife in his mouth, and was occupying himself in passing his hand over the throat of one of the sleeping pupils. He was at once awakened and so possibly prevented from doing some terrible damage. It is said that the lad is a son of a butcher, and he states he dreamed he entered into his father's business and that he went into the kitchen for a knife, with which he wanted to kill the pigs. Midnight somnambulists of this class are very dangerous and there seems every probability that some of the sleepers would have lost their lives had not the would-be butcher been found in time, for in these cases the special senses usually perceive things only in relation to their dream, and so, while being able to see the things connected with his object in view, he would be oblivious to the other surroundings and fail to realise his position. The disorders of sleep are probably in most cases due to differences of functional activity between different parts of the cerebrum; thus, while some are inactive others remain active and, indeed, in some cases become overactive. Talking during sleep is one of the simpler examples of activity of some parts of the nervous system while others are out of action; but walking and doing definite actions is far more complicated and may be dangerous both to the individual concerned and others who may chance to come in his way.

ANTI-STREPTOCOCCIC SERUM.

THE results obtained hitherto in the treatment of septicæmia by means of the antitoxic serum of Marmorek have been very much less marked than those which have followed the antitoxin of diphtheria. Its use in the treatment of puerperal fever has not been attended with brilliant success. It is to be remembered, however, in this connexion that the serum has in some, and probably in many, instances been injected after the disease had become well-established in the system of the patient. In view of the very rapid absorption of the septic poison in these cases, and of the large uterine surface available for this purpose, the significance of such delay should not be overlooked. It is probable, too, that the disease under treatment has not always been the effect of the streptococcus alone, but primarily sapræmic and a consequence of putrefaction in retained congula. It is, however, encouraging to note that even in the treatment of puerperal cases a distinct amelioration of symptoms after injection has been noticed by some French observers (Patru, Maillart, Ribemont, &c.). M. Boucheron[1] speaks highly of his results in the treatment of purulent dacryocystitis by this method, injections of 5 c.c. repeated at intervals of a few days having a marked effect even in chronic cases of this disease. He employs the serum also as a preventive of possible suppuration after cataract operations. As yet it would seem that the antitoxic power of this remedy is not great, and it may be that the secret of success in acute cases lies, not only in the promptitude of its employment, but in the frequency of its repetition. The most that can be said so far is that past experience, though indecisive, is encouraging rather than otherwise, and lends some colour to the hope that with a purer and more powerful serum better results may be expected. Practitioners who have had to combat the horrors of puerperal septicæmia are not likely to undervalue even such hope in this connexion.

[1] Presse Medicale, Nov. 18th, 1896.

HOUSE SURGEONS' FEES.

ON Jan. 3rd an inquest was held at the Croydon Hospital on the body of a patient who had died in the institution. It appears that the coroner "consented" to a post-mortem examination being made, as he said, "in the interests of science," but whether he issued an order for the same is not stated. That, however, matters little. It is strange that it is not universally known by this time that a medical man who has attended a patient at a hospital, workhouse infirmary, or other public institution—the death having occurred in such place—cannot recover fees for making a post-mortem examination or for giving evidence at an inquest. At the inquiry referred to we learn that the locum tenent for the house surgeon complained that he was not allowed remuneration, and according to the newspaper reports there was a sharp passage of arms between the medical gentleman and the coroner, which culminated in the latter threatening to commit for contempt of court, The incident is to be regretted, but whatever the ethical merits may have been it is clear that the coroner was legally right. It is sometimes difficult to obtain an order from a coroner for a post-mortem examination. To make one without his order or consent is to be guilty of an assault on the body—a punishable offence. In this case the coroner allowed a necropsy "in the interests of science," and for this the profession should be grateful. Anything which tends to clear up the mystery of the cause of death is desirable. We cannot see on what grounds a medical man can take offence when he is not paid for work which the Act of Parliament distinctly says shall be done without fee.

THE FAMINE IN INDIA.

AMID the conflicting statements that have been made from time to time regarding the extent and severity of the famine to be anticipated or actually existing at the present time, it is a very puzzling problem for the perplexed newspaper reader to form a correct estimate of the real condition of affairs in India in respect of any present or prospective famine in that country. It is generally admitted, however, that there is a very large and unusual amount of distress among the natives of India at the present time owing to the scarcity and high prices of food, and that this distress threatened at one time to be enormously increased and aggravated in its area and intensity by a failure of the cold weather rains. Rain has, however, fallen to some extent over most of the affected districts, and the Government of India should soon be in a position to form some idea of the estimated dimensions of the scarcity and the proportions of the disaster that will have to be dealt with. Wherever rain has fallen at all copiously the prices of food have also fallen, but the amount of rainfall has, in many parts of the country, been quite inadequate, and we are still unable to form a correct estimate of the situation. We gather from the *Times* that the Government of India have, however, now secured full reports from all local administrations regarding the famine and the

state of the crops, and that an early opportunity will be taken to make a public statement in the Legislative Council on the subject. Meanwhile, close attention is being paid to the question of food supplies in areas where famine already prevails. We should consequently soon be in a position to form some notion of the extent of charitable aid that will be required from this country for the distressed natives of India and the organisation that is proposed for dispensing it in the most effective way. From the latest accounts we infer that the famine is likely to be severe and widespread, and that the sooner the Famine Fund is started in this country the better. A very large proportion of the populations of India are at the best of times miserably poor and the daily struggle for a bare subsistence is hard enough. Famine or any increased scarcity of food is immediately followed by an increased amount of sickness and mortality.

THE HEALTH OF LORD ROSEBERY.

WE are glad to be able to give a favourable account of Lord Rosebery's condition. On Thursday he was practically convalescent; the temperature was normal, there were no complications, and he was allowed to get up. As from this it will be seen that the attack has been but a slight one it is reasonable to hope that Lord Rosebery will escape the wearisome insomnia which resulted in 1895.

MEDICINE will rejoice with the other sciences to learn that Mr. Herbert Spencer has consented to sit for his portrait in response to a circular letter signed by some eighty well-known leaders of thought. The effect which the System of Synthetic Philosophy has had upon modern intellectual development can be exaggerated with difficulty, and to the student of more than one side of medicine this fact is very well known. An account entitled "The Herbert Spencer Portrait Fund" has been opened at the Western Branch of the Bank of England, Burlington-gardens, W.

THE fifth award of the Reuben Harvey Memorial Prize will be made on July 1st, 1897. The competition is open to all students, licentiates, and graduates of the various schools of medicine in Dublin which are recognised by the medical licensing bodies in Ireland, and is of the value of £25. Further details will be found in our advertisement columns.

THE annual general meeting of the Neurological Society of London will be held at the rooms of the Medical Society, 11, Chandos-street, Cavendish-square, W., on Thursday, Jan. 14th, at 8.45 P.M., when Dr. G. H. Savage, the President-elect, will deliver his inaugural address on Heredity in the Neuroses.

DR. G. SIMS WOODHEAD, F.R.S. Edin., Director of the Research Laboratory of the Conjoint Board of the Royal Colleges of Physicians and Surgeons, has been elected President of the British Medical Temperance Association in place of the late Sir B. W. Richardson.

THE Council of the British Institute of Public Health have awarded the Harben medal for 1897 to Professor M. von Pettenkofer, Emeritus Professor of Hygiene in the University of Munich, in recognition of his distinguished services to the public health.

BACTERIOLOGY IN 1896.

IN the year 1896, though much valuable and permanent work was done in the department of bacteriology, there has been no event comparable in importance to the anthrax, tubercle, cholera, or diphtheria discoveries of some recent years. It has not, however, been a year of "marking time," and some of the published investigations are of such solid character that they must be looked upon as really important contributions to bacteriological science. What strikes the observer most is that an attempt has been made, not to start fresh and striking theories, but to gain an appreciation of those that have been advanced and to see how far well-recognised facts fit in with them.

The application of observed bacteriological facts and rules to therapeutics has had a much wider and more far-reaching influence than could at one time have been anticipated, whilst the relation of bacteriology to the etiology and diagnosis of disease has during the last year become closer and more and more important since various modifications of Pfeiffer's reaction have been brought into use. Almost all the new work that has been done bears on the action and inter-action between micro-organisms and living animal tissues, either as seen in the animal body itself or as resulting in the storage of certain active products in the blood, and separable from the serum of animals affected with certain specific diseases or treated with the products of the bacteria associated with these diseases.

Early in the year Dr. Louis Cobbett confirmed the observati n that even the blood serum of normal horses may possess definite antitoxic power against diphtheria poison. He also supported the suggestion that there are two different therapeutic agents present in the serum of immunised animals, one acting against the toxin and the other against the bacilli by which the toxins are formed, and that the formation of this antitoxic serum is in great measure independent of, though often necessarily running parallel with, immunity of the tissues, either locally or generally. A few months later Dr. Cartwright Wood read a communication (a full abstract of which appeared in our columns) to the Royal Society, in which he reported a most important improvement in the method of producing antitoxins rapidly and in large quantities. By using the diphtheria "albumoses" described by Dr. Sidney Martin and injecting them in large quantities at short intervals he was able to obtain diphtheria antitoxin of considerable potency (125 units per c.c.) in twenty-eight days, a result never hitherto obtained, whilst by combining injections of ordinary broth toxin with his "albumose" injections he, as recently reported in our columns, obtained diphtheria antitoxin of greater potency than has, so far as we are aware, yet been obtained in large quantity. The importance of this investigation is apparent when the advantages of this method, as brought forward by Dr. Wood, are considered: (1) that powerful diphtheria antitoxins can be produced without risk in a much shorter period than has been previously possible; (2) that much more powerful antitoxins can be easily produced, so that the amount necessary to be injected into a patient can be greatly reduced, and one of the great objections to its introduction into private practice in this country can be removed; and (3) that the greater strength of the serum will permit of the patient receiving at the beginning of treatment a sufficient quantity of the serum at one injection, when, as is universally recognised both by animal experiment and clinical experience, its curative action is exerted most markedly.

From the reports that we were constantly receiving from members of our profession it soon became evident that owing to the difference in standards of measurement and nomenclature much confusion existed as to the relative strengths and desirable doses of the various anti-diphtheritic serums on the market. We therefore appointed Special Commissioners to inquire into the whole question of strength of these serums in order that the relative doses might be fixed. These results were in many cases remarkable; but as the relative strength of each was obtained a medical man, taking Behring's serum as a standard, could calculate what dose of any other serum must be injected in order to introduce a dose of a certain number of units. We have reason

to believe that the information thus afforded has been of considerable assistance to those who have to work with anti-diphtheritic serum and has contributed in some measure to the improvement of the serum treatment in this country and to putting the dosage on a rational and intelligible basis. Before leaving the serum question it must be pointed out that anti-streptococcic serum and anti-tetanic serum have both been successfully prepared at the laboratories of the British Institute of Preventive Medicine, but as yet the cases treated with them are not sufficiently numerous to afford any very satisfactory statistics. Quite recently Dr. Washbourn has announced that he has been able to produce a serum which exerts a distinct protective action against the streptococcus of pneumonia. In connexion with this work, too, he has been able to produce what must be looked upon as a saprophytic or non-malignant form of the pneumococcus and from old cultures an extremely resistant and persistent form of the same.

One of the great questions of the year has been the value of the various modifications of Pfeiffer's reaction in regard to the diagnosis of various diseases. The reaction first indicated by Bordet and worked out by Durham has, in the hands of Widal, Grünbaum, Wyatt-Johnston, Delépine, and others, given most accurate results in the case of typhoid fever, and there is every prospect that this method will, before long, come into very general use and give as accurate results as have been obtained in diphtheria by microscopical and cultural examinations. Durham observed that the action of dilute serums of highly immunised animals on susceptible microbes was to cause them to become aggregated into clumps even *in vitro* and observable with the naked eye, the clumps falling to the bottom of the tube and leaving a clear supernatant fluid. Using this method for diagnostic purposes in the case of typhoid fever the reaction can be observed under the microscope and also *in vitro*. All the observers who have done work on this point have come to the conclusion that the antitoxic property of typhoid serum is developed at a comparatively early stage of the disease, and that once developed it enables the diagnosis to be made with a comparative degree of certainty.

The outbreaks of typhoid fever that have been supposed to be associated with infection through the ingestion of oysters from beds or "layings" contaminated with typhoid-laden sewage have led to the appearance of two important reports on this question of infection through oysters. Dr. Cartwright Wood in his report brings forward most important evidence as to the possibility of infection by oysters contaminated with typhoid sewage. He shows that cholera organisms may be demonstrated experimentally as continuing within the oyster for eighteen days, whilst in infected water in which oysters were placed they could be found for as long a period as two months, whilst typhoid organisms under similar conditions remained for three months. Dr. Klein says that these organisms may persist in sea-water tanks for two or more weeks, the typhoid bacillus retaining its characteristics unimpaired. In one case Dr. Klein found Eberth's typhoid bacillus actually within the oyster. All this evidence goes to prove that disease germs are much more persistent in sea-water than has been generally imagined, and although it may be, as Dr. Thorne Thorne insists, that it is only under special conditions that we find typhoid fever and cholera ensuing as the result of consuming oysters laid in polluted waters, such cases as are traced to this source necessarily form a very small percentage of the cases actually so infected, whilst these, again, bear a very small proportion to the cases that are infected by them. The whole bearing of these reports on the question of infection is extremely important, and the bacteriological investigations published during this year will have a wider bearing on the subject of the contamination of water, whether fresh or salt, than has any work that has been done for a considerable period.

The outbreak of bubonic plague in India affords a most striking object lesson or demonstration of the modification of a pathogenic organism, as evidenced by the virulence of the disease set up by it at different periods of an epidemic. When first it was announced that the plague had broken out in Bombay the percentage of deaths was exceedingly low, and for some time a large proportion of the cases attacked were comparatively mild. Recent reports, however, indicate that not only has the number of cases increased at an alarming rate, but the percentage death-rate has gone up in a corresponding fashion, whilst we have further evidence of the increased virulence of the organism in the fact that Europeans, who in the first instance were not affected, are now attacked in considerable numbers. Metschnikoff's experiments on cholera and on the exaltation of the virulence of the organism, the difference between infection by the blood and infection by the alimentary canal, and his observations on the toxins produced by cholera organisms are of very great interest; whilst the observations made by numerous other observers on the production of cholera and typhoid toxins and antitoxins continue to add to the sum of our knowledge on these subjects.

The filtration of water, especially in relation to the elimination of bacteria, during the year occupied considerable attention; whilst, as was pointed out in the Report of our Special Commissioner on the Utilisation of Micro-organisms in the Purification of Sewage,[1] certain advances have been made as regards the conversion of sewage materials into inert substances by the action of bacteria. This question, started on a practical scale by Mr. Scott Moncrieff, had been suggested as a possible method by chemists some fifteen years ago. Mr. Dibdin of the London County Council has proved that the chemically treated sewage may be further enormously improved by passing it through coke breeze filters in which numerous organisms have been allowed to grow; whilst Mr. Cameron, borough surveyor of Exeter, has carried out a long series of experiments in which he has been able to confirm the results obtained by other workers, starting, as Mr. Scott Moncrieff does, with the crude sewage. In all these cases the purification, as indicated by the amount of oxygen absorbed, amounts to something like 75 per cent., and the whole of this is put down to the action of bacteria.

During the year the Royal College of Physicians of Edinburgh opened its magnificent new laboratories for the carrying on of pathological, bacteriological, and general experimental research. A well-equipped pathological and bacteriological institute was, under the direction of Professor Joseph Coats, added to the Western Infirmary, Glasgow, in connexion with the teaching of these subjects in the Glasgow University. Among the more important books issued during the year may be mentioned Pearman and Moor's "Applied Bacteriology"; the fourth edition of Crookshank's "Text-book of Bacteriology"; Clifford Allbutt's "System of Medicine," by various authors, in volume 1 of which is an admirable account of infectious diseases, immunity, &c.; and finally Sternberg's "Text-book of Bacteriology," which contains, revised and brought up to date, that portion of his "Manual of Bacteriology," published in 1892, relating to pathogenic bacteria, omitting the detailed descriptions of non-pathogenic forms and the extensive bibliography included in the larger work. The bacteriological work of the year together forms a solid and permanent contribution to scientific and applied medicine and surgery and it certainly offers a most powerful argument to those who wish to see the subject of bacteriology made part of the curriculum of every medical student.

CHRISTMAS AT THE HOSPITALS.

SPECIAL efforts are made at Christmastide on the part of the medical and nursing staffs to brighten the lives of the inmates of our various hospitals. The wards are gaily decorated with evergreens and flowers, gifts are presented, entertainments are provided, and as far as practicable the dietary scale is added to and made to resemble somewhat the festive fare enjoyed by those in health at this period of the year.

King's College Hospital.—In the early morning of Christmas Day a suitable gift was placed by the bedside of every patient in the hospital. These gifts were provided by many kind friends and consisted to a considerable extent of articles of warm clothing and many toys for the children. For dinner there were turkeys, plum pudding, &c., for all the patients who were well enough to enjoy such fare. During the afternoon the patients received their friends. After tea there was a special musical service with carol singing in the chapel, which was decorated with excellent taste. On Boxing Day in the wards, which were also decorated admirably and illuminated with hundreds of candles and fairy lights, there was festival tea for all the patients at half-past four o'clock and an entertainment

[1] THE LANCET, Dec. 5th, 1896, p. 1631.

in each ward. The entertainments were given by the resident medical officer, students, and nursing staff, assisted by friends. All passed off most successfully, and both on Christmas Day and Boxing Day the spirit throughout the whole institution was that of happiness, good temper, and enjoyment. The resident medical officers and nursing staff were untiring in their efforts to give pleasure to others.

St. George's Hospital.—On Christmas Day, the wards being very prettily decorated by the nursing staff, the patients who were able to partake of such "good cheer" were provided with roast beef and plum pudding. On the evening of Dec. 28th a "Christmas Tea" took place for all the patients in their several wards, presided over by the lady visitors and their friends, and on Jan. 2nd an entertainment for the patients was given in the Board-room, consisting of "animated photographs," music, &c. Entertainments for the nursing staff have been arranged for Jan. 7th and 8th (to-day, Friday), comprising a dramatic performance given by one of the visiting surgeons and his friends; and on Jan. 14th and 15th entertainments will be provided by the resident medical staff.

Victoria Hospital for Children, Chelsea.—The usual Christmas tree was given to the children on Christmas Day. The annual treat will be given in the second week in January. The wards were prettily decorated for Christmas Day, and the usual dinner of game, turkeys, and plum pudding was partaken of by the patients.

Hospital for Sick Children, Great Ormond-street.—No efforts were spared at this institution to make Christmastide as bright and happy a time as circumstances would allow. The wards were charmingly decorated, and, needless to state, the little ones were not forgotten by Santa Claus. On Dec. 26th a Christmas entertainment was given for the patients and on Monday the out-patients were entertained.

City of London Hospital for Diseases of the Chest, Victoria Park.—On Christmas Day the usual Christmas dinner was provided for the patients, at which some members of the committee of management and other visitors were present. Christmas cards, books, periodicals, &c., were distributed, together with dolls and toys for the young patients. In the evening a musical entertainment was given, which afforded much amusement and pleasure to the inmates of the hospital.

German Hospital, Dalston.—Christmas trees were placed in all the wards, and there was a distribution of useful presents to patients and inmates on Christmas Eve. The carol singing was much appreciated.

Chelsea Hospital for Women.—On Christmas Day, from a fund collected by the ladies' committee, each nurse and member of the household staff received a present, and the Christmas dinner and tea for both patients and staff were provided from the same fund. Each patient was allowed one visitor to tea, during which time the nurses sang carols. On Boxing Day the nurses and their friends gave the patients a concert, consisting of part-songs, solos, and Haydn's *Toy Symphony*, which had been carefully rehearsed. On Jan. 12th the ladies' committee will give a variety entertainment, to be preceded by a tea.

Middlesex Hospital.—On Christmas Day all the patients who were able to do so partook of turkeys or geese, plum puddings, &c. There was a monster Christmas tree in the board-room, from which each patient able to attend received a present; for those unable to leave their beds a bran-pie was provided. The wards were decorated and the patients' friends were allowed to visit them for two hours in the afternoon. In each of the children's wards there was a special Christmas tree, the one in Princess May Ward being lighted by electricity.

Brompton Hospital.—The Christmas festivities at this institution gave, as in many former years, great pleasure to the inmates and were as successful as willing hearts and hands could desire. The various wards and galleries were elegantly decorated by the sisters and nurses with coloured lights, mottoes, and evergreens. The creature comforts included turkeys, with port wine, oranges, and tobacco. During the festive season a Christmas tree and a concert were given.

Paddington-green Children's Hospital.—The Christmas treat and entertainments to the little patients in this hospital were given on the 6th inst. at 4 o'clock. The wards were tastefully decorated with coloured ribbons, &c., by the matron and nurses. A Punch-and-Judy show was provided in one ward and a lantern display in the other. Following this the large cracker twelve feet long, filled with toys, was "pulled" and the toys were distributed amongst the children. The number of patients then in the wards was 37. The parents took tea with the children on Christmas Day.

Royal Orthopædic Hospital.—As usual at this season, the various wards were decorated for Christmas, the material for which had been kindly supplied by a member of the medical staff. On Tuesday evening, Dec. 22nd, an entertainment was given to the patients and nurses by the Tudor Black and White Minstrels, under the direction of Mr. W. H. Harris, consisting of choruses, songs, banjo solos, &c. The programme concluded with a Christmas carol, rendered in good style by the whole troupe. On Christmas Day each patient received a present through the kindness of a member of the committee and the usual Christmas fare was provided. In the evening the patients met together in the Victoria ward and had "high tea."

National Hospital for Diseases of the Heart, Soho-square.—On Christmas Eve an entertainment for the patients was given in the women's ward. Tea was given in the day ward. The room was decorated with holly, mistletoe, and chrysanthemums. At one end a small stage was placed on which Beauty and the Beast, the merchant, the wicked sisters, and the Fairy Silver-star duly appeared. This was preceded by songs, recitations, and dances. Christmas carols were admirably sung by the St. Anne's choristers. Proceedings were for a short time interrupted by the arrival of Father Christmas.

London Hospital.—The patients in the London Hospital thoroughly enjoyed their Christmas. Before daybreak on Dec. 25th the nurses bore fairy lamps round the wards and sang carols. As soon as breakfast had been finished Father Christmas (one of the medical staff) made a joyous progress through the wards, bringing in his train a much appreciated and valuable distribution of gifts. Warm clothing for nearly all, knives, books, and other small presents and toys for the children had been freely provided, and were most gratefully appreciated by the poor patients to whom they were given. The wants of these sufferers are well known to the sisters and none were left out. The patients' friends were specially admitted from 2 P.M. to 3 30 P.M., and at 4 P.M. tastefully arranged teas were provided. From then onwards to 8 30 P.M. happiness reigned supreme. The Christmas festivities concluded on Monday, Dec. 28th, when the annual Christmas trees were provided in Queen and Beatrice wards.

East London Hospital for Children, Shadwell.—The usual Christmas entertainment for the in-patients was held at the Children's Hospital, Shadwell, E., on Dec. 30th, when a large number of subscribers and friends of the charity were present. The wards were tastefully decorated and were inspected by the visitors between 3 P.M. and 4 P.M. A Punch and Judy show and two very large Christmas trees formed the chief items in the programme and afforded the greatest pleasure to the children. During the afternoon a selection of popular airs was performed by a military band.

St. Thomas's Hospital.—All the wards were prettily decorated with festoons of holly and evergreens and gay with artistic coloured drapings, Chinese lanterns, and fairy lights. On Christmas Day the patients' fare consisted of ribs of English beef, Christmas pudding, and ale for those able to take it. Pipes and tobacco were supplied for the men. Each patient was permitted to invite one friend to tea with him or her. On Boxing Day the matron was "at home" in the Nightingale Home at 4.45 P.M. At 6 P.M. a band of the nurses, led by the Home Sister, went from ward to ward singing Christmas carols. On the other days there were various musical entertainments given in the different wards by residents in the hospital and their friends. On New Year's Eve the Christmas tree entertainment was held in the Children's Ward (Victoria). This ward is for children under six years of age, but on this day the sister invited all the elder children.

University College Hospital.—The Christmas entertainment to the patients at this hospital was given on Dec. 30th, the cost of the entertainment being defrayed out of funds raised by means of a special appeal made to the members of the staff, the committee, and supporters of the charity. The children's and other wards were prettily decorated and illuminated. After tea there was a distribution of toys and other things, and there was a presentation to each patient of a parcel of warm clothing. In the course of the evening a concert was given.

SIR JOSEPH LISTER: THE FIRST MEDICAL PEER.

WE have pleasure in presenting to our readers a portrait of Sir Joseph Lister, the first medical peer. Sir Joseph Lister, Bart., President of the Royal Society, was born in 1827, and educated at the University of London, where he took the degree of B.A. in 1847 and M.B. in 1852, in which year he also became F.R.C.S. Eng. He was appointed Regius Professor of Surgery in the University of Glasgow and later Professor of Clinical Surgery in the University of Edinburgh, taking the degrees of F.R.C.S. Ed. in 1855 and F.F.P.S. Glasg. in 1860. Since these dates the following honours have been awarded him:—F.R.S. Lond. and Edin., LL.D. Edin., M.D. (*hon. caus.*) Dub., LL.D. Glasg., D.C.L. Oxon., LL.D. Cantab., M.D. (*hon. caus.*) Würzburg, and M.D. (*hon. caus.*) Bologna. In 1880 Sir Joseph Lister received the Royal Society's medal in recognition of his magnificent discoveries in scientific medicine, and in 1883 he was created a baronet. In 1897 he becomes the first medical peer, the honour now done him by Her Majesty being received with unanimous applause by the whole country. In the spring of 1896 we wrote as follows upon this point:—"It would have afforded us the greatest satisfaction and pleasure ..... if the recent list of peers among the Birthday Honours had included the name of one whose services to the nation and to humanity in the introduction of antiseptic surgery have received universal recognition. Such services are indeed beyond reward, but the admission of the President of the Royal Society ..... would add lustre to the peerage. It is from such men that the second estate of the realm should be reinforced if, as it should, it is to contain the real nobility of our land." Sir Joseph Lister married a daughter of James Syme, the celebrated Edinburgh surgeon, but has no issue. Lady Lister died in 1893.

SIR JOSEPH LISTER: THE FIRST MEDICAL PEER.

SPECIAL ADDRESS OF THE COMMITTEE OF THE ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND:

INVITATION TO FELLOWS OF THE COLLEGE TO JOIN THE ASSOCIATION AND TAKE AN ACTIVE PART IN FORWARDING ITS OBJECTS.

WE have been desired by the Committee of the Association of Fellows of the Royal College of Surgeons of England to publish the following address to the Fellows of the College:—

On the Fellows of the College at present devolves the election of the governing body and consequently the control of the policy and work of the institution. Since this control, limited as it is, was conferred in 1843, when the order of Fellows was instituted, it can be claimed with satisfaction that in important particulars the Fellows have widened the policy, improved the work, increased the utility, and advanced the development of the College.

During the first thirty years of this control none of these results became apparent, but during that time the recognition of existing abuses and imperfections was forming and growing—the necessary preliminary of all improvement. During the last twenty years several distinct advances and definite improvements have been effected, some of which have come from without, the result of concomitant advances in professional and public requirements—as, for instance, the gradual improvement in our system of education and methods of examination, in which we have played rather a passive than an active part; but others influencing our collegiate vitality and activity have arisen within the College and are distinctly due to our exercise of our electoral functions and to the more or less consistent selection of members of Council pledged to promote those advances. Other factors than the desire to attain these objects often interfere, such as the elements of personal and hospital influence, and to that extent our course has been wavering and inconstant.

Among the advances may be mentioned the institution of the annual general meeting of Fellows and Members and of the annual report of the Council submitted to that meeting; the provision made for extraordinary general meetings; the use of voting papers at the annual election of members of Council, and, more recently, the simplification of the rules originally framed by the Council for their distribution and return; and the institution of separate half-yearly meetings of the Fellows for consultative purposes, by all of which advances the Council is brought into touch with its constituency, free discussion of interesting topics is elicited, and moral support afforded in matters of doubt and difficulty, such as the admission of women to its diplomas. A degree of vitality and of communion of thought and interest has thus been imparted to the whole collegiate body corporate which before was entirely wanting.

The policy which has effected these improvements and advances found its expression and the force of systematic action in the formation of the Fellows' Association in 1884, and since its organisation the association has systematically and undeviatingly promoted such improvements with no slight measure of success, and has resolutely supported the maintenance of concessions from the Council to the Fellows and Members whenever such concessions appeared or

actually were in danger of being withdrawn. The work already done the association considers but as part of a consistent whole, and the advances already secured but as stages to a definite goal. That goal is the embodiment in a new Charter of the concessions to the Fellows and Members by the Council and such other provisions as may be settled by the Council and the constituency.

One effect of the concessions which the association has been instrumental in securing for the Fellows from the Council has been the growth of opinion among the Fellows in favour of extending and strengthening the sense of collegiate life within the institution by giving to the Members a share in the franchise and representation on the Council. How spontaneously this feeling has spread is shown by the fact that when the Council referred for the consideration of the half-yearly meeting of Fellows in January, 1896, a resolution passed at the annual meeting of Fellows and Members in 1895, asking for the addition of eight representatives of the Members to the Council, a very large majority of the eighty-six Fellows present voted for the principle of the representation of Members of the College on the Council, and without any previous concert in any way seven members of the association spoke in favour of the concession. The subject had forced itself to the front and had to be dealt with; about half of the Council itself was known to be prepared to grant representation to the Members; and it was felt that the time had come when a long-vexed question should be set at rest in a moderate, reasonable, and practical way; and that by giving to the Members some share in the control of the body corporate, some voice in its management, and some interest in working for its welfare, the undivided attention of the Council and of the Fellows and Members would be turned to other questions of the highest importance to the College, the profession, and the public.

In consequence of the vote at the half-yearly meeting of the Fellows in January, 1896, the Council referred the matter for decision to the whole body of Fellows. The poll will close on Jan. 31st, 1897, and as many Fellows have not yet returned answers to the questions put before them the association would strongly urge on every elector who has not yet done so to vote for a concession which will harmonise all interests and greatly add to the strength, stability, power, and influence of the College both within and without the profession.

In taking up the well-known case of Mr. R. B. Anderson, whose professional rights as a Fellow and Member of the Royal College of Surgeons of England were wantonly and grossly infringed in Tobago and Trinidad, and appointing representatives on the Civil Rights Defence Committee the association has followed the lead of the Council of the College. Guided by the sense of its obligations under By-law XV., by which the Council "undertakes to protect and defend every Fellow and Member of the College who may be disturbed in the exercise and enjoyment of the rights, privileges, exemptions, and immunities acquired by him as a Fellow and Member or Member thereof," the Council appointed representatives on the Civil Rights Defence Committee in June, 1894, and its coöperation has been of signal service to Mr. Anderson. In accordance, also, with a recommendation of the Fellows at the half-yearly meeting in July, 1896, the Council instructed its representative on the General Medical Council "to forward in every way that seems feasible the objects of the Civil Rights Defence Committee in the case of Mr. R. B. Anderson." The resolution on this matter passed by the Fellows was moved by Mr. Holmes and seconded by Mr. George Jackson of Plymouth at the direct instance of the committee of the association, and marks an epoch inasmuch as it illustrates the principle that the representatives of corporations on the General Medical Council should represent effectively, not merely the views of their governing Councils, but the interests of the constituents of those bodies, and so far as the College is concerned the adoption of the resolution by the Council constitutes a precedent of the utmost value to the Fellows and Members.

Whilst warmly acknowledging the sympathy and moral support of the Council of the College in the case of Mr. Anderson, the committee of the association must point out that the only way to redress Mr. Anderson's wrongs and to re-establish his professional rights as a Fellow and Member is by a grant of money for the prosecution of his appeal to the Privy Council. The connexion of the Council with the appeal to the House of Lords, though strictly logical and demonstrable, is less obvious, and therefore the committee is not surprised that the Council has not perceived it or felt justified in voting funds for the appeal to the House of Lords. This latter appeal had to be taken up by the Civil Rights Defence Committee after the College had appointed delegates on that Committee, and in addition to that appeal to the Privy Council which the Civil Rights Defence Committee was originally formed to promote. The obligation of the Council of the College to assist in this appeal to the Privy Council for the purpose of securing the abrogation of the unjust and iniquitous decisions against Mr. Anderson, the result of judicial corruption which a Royal Commission has emphatically condemned, appears to the committee to be very clear; for, notwithstanding the opinion of its solicitor, the Council virtually decided, in June, 1894, that Mr. Anderson's rights as a Fellow and Member have been infringed, and it is only through this appeal that Mr. Anderson can be restored to his former position and become free to practise in Tobago and elsewhere and to enjoy those rights as a Fellow and Member which the Council has undertaken to defend. For this reason and because the committee recognises the obligation of the Council of the College in regard to both appeals promoted by the Civil Rights Defence Committee the committee of the association has furthered resolutions at meetings of the College asking the Council to grant a sum of money for the prosecution of Mr. Anderson's appeals. That such a grant would be a new departure and without precedent is true; but then Mr. Anderson's case is without precedent, and combines principles of so great importance, both to the public and to the profession, that its settlement by the intervention of the greatest of our professional corporations would materially add to the prestige and power of the College, and justly establish for it, in default of any action on the part of the General Medical Council, the position of a vindicator of professional rights and a leader of professional opinion.

If a favourable response to the claims of the Members of the College to representation on the Council should be given by the Fellows—and this would be assured if the Fellows who have not voted would vote for the concession—a new Charter would be required to confer such representation. It would then become necessary to embody in it the privileges and advantages which now depend only upon the good pleasure of the Council, such advantages, for instance, as the annual general meeting of Fellows and Members, the annual report of the Council, and the half yearly meetings of the Fellows. An organisation like that of the Association of Fellows must be of great service as a medium of communication with the Council, and therefore the committee earnestly invites the coöperation of all Fellows who recognise the services which the association has rendered to the Fellows during the last twelve years and who approve of the principles and policy which the association is upholding and steadily pursuing in the best interests of the College.

Signed on behalf of the Committee,

H. PERCY DUNN, Hon. Sec.

54, Wimpole-street, Dec. 30th, 1896.

THE HOUSING OF THE POOR AT MANCHESTER.

FIVE years have elapsed since we published a special report on the re-housing of the poor at Manchester.[1] We then described a somewhat bold scheme which the corporation were about to carry out, but we also indicated that the good which might reasonably be expected to accrue from this undertaking was likely to be marred by flaws in the detail of application. An area measuring 19,271 square yards where 1250 persons lived, had been condemned, together with three other smaller areas that had between them 620 inhabitants. On the largest (Oldham-street) area it was proposed to build a municipal common lodging-house after the model of those that have been so successfully erected at Glasgow; then on the other portion of the land model tenement dwellings and artisans' cottages were to be likewise erected by the municipality. Thus the city authorities were to set an example in the three forms of dwellings—the cottage, the tenement block building, and the common lodging-house.

[1] THE LANCET, July 18th, 1891.

This municipal property was to serve as a menace to all private property owners. The latter were to be told that if they did not make their houses as good in every respect as the houses, &c., owned by the municipality they would in their turn be expropriated and the town would itself erect proper dwellings. We pointed out, however, at the time that both the text of the law and the character of some of its administrators did not favour the realisation of this bold scheme. The compensation to be paid by the sanitary authority to the owners of the condemned property had to be fixed by an arbitrator, who might take into consideration not merely the actual worth of the property, but what might be its value at some future period. Further, the owners of the condemned property were at liberty to engage the most expensive counsel to defend their rights and the sanitary authorities were obliged to pay these legal advisers. Thus the costs of compensation and the legal costs were likely to be so great as to make it impossible for this municipal enterprise to succeed from a financial point of view. We protested at the time that if a house was so insanitary as to be condemned as unfit for human habitation, the owner should receive only a very small compensation. If the owners of unwholesome property could be expelled at a comparatively small cost to the sanitary authority and at some loss to themselves and if, on the other hand, the property thus municipalised was a source of income, of profit, to the town, then indeed speculators in slum property and in jerry-built houses would be seriously menaced. Honourable *bonâ-fide* private enterprise might still prosper; but that form of speculation which is founded on the extreme misery and helplessness of the poorest classes would receive a death blow. As matters now stand, however, the speculators in slum property know that the threats made against them are not likely to be realised. What with legal expenses and the compensation to be paid the execution of such threats is too costly to be carried out on anything like a large scale. Nor does it much matter if they are enforced since ample compensation is given. Thus are the owners of unwholesome house property encouraged and the purpose of the law on the housing of the poor evaded.

There was another ugly feature in the state of affairs in Manchester. Much of the poorer class of house property had passed out of the hands of its original owners—men of position and standing, who could afford to deal generously towards their tenants—and was now in the hands of former rent collectors—a harsh, rough class of self-made men. These rent collectors had lent money on mortgage to their former employers and thus became owners where they had been but collectors. Such persons are naturally opposed to sanitary reforms and at election times can exercise very strong pressure on their tenants. This has told at the municipal elections, and the interests of slum property owners is far too well represented on the town council. Such was the position of affairs described in the report we published in 1891.

Under these circumstances we are not surprised to find that the progress achieved since then has been slow and somewhat disappointing. On two of the areas condemned under the Housing of the Working Classes Acts in the years 1889-91, blocks of artisans' dwellings have been built which can house 1250 persons and 450 persons respectively. These dwellings are full of tenants. Many complaints have been made against them. They have been qualified as "barracks" and as altogether opposed to the love of privacy and independence and to the customs and tastes of the Manchester population, but the fact remains that the tenements are let easily and that many persons are waiting impatiently for vacancies so as to come into these block buildings. Nevertheless these dwellings do not pay, and this financial failure is attributed by most of the electors to blundering or perhaps to jobbery on the part of the town council. The real fault, however, rests with the law and with the consequent excessive compensations and legal costs that had to be paid so as to clear the land of its former owners. This has not been sufficiently explained to the Manchester electors. Indeed, one of the most eminent town councillors was not re-elected at the last elections principally because he neglected to give sufficient information to his constituents.

Discouraged by the little success which has met the building of tenement houses the town council has, for the moment, abandoned the project of building a common lodging house. Nor has any other large scheme been brought forward. There are many areas remaining that should be condemned, but the town council now seems afraid to take up the subject. For the moment, the policy seems to be that of proceeding very slowly. Thus it is thought to avoid the necessity of re-constructing in the immediate neighbourhood of condemned dwellings. This, it is urged, is not necessary, unless a large number of persons are simultaneously driven out of their homes, because many of the poor go of their own accord to live in the outskirts of the town. Then, also, the well-to-do classes are migrating to the suburbs and the houses which they inhabited in central districts thus became available for a poorer class of tenants. Another, and an excellent, manner of dealing with this difficulty is to build colonies in the outlying country to be reached by cheap trams or railways; but, as this would deprive the municipality of both rate-payers and of electors, it cannot be expected that town councillors will take the initiative in such a movement.

In respect to back-to-back houses, which are so numerous in Manchester, the policy now pursued is to pull down one out of four houses so as to create a back yard. This, however, is bitterly resented by the owners of back-to-back houses; yet the result is not so much opposed to their interests as might be supposed at first sight. They lose a house, it is true, but the remaining three houses are so much improved by the possession of a back yard and the possibility of through ventilation, that an augumentation of rent naturally follows. Then it is the turn of the tenants to complain. Hence hostility is created against the town council, either amongst the owners or the occupiers, and this is another reason for proceeding slowly. All these circumstances mitigate sadly against the cause of sanitary reforms. It is questionable, also, whether it is wise to improve these back-to-back houses. That they are bad in principle admits of no doubt. Also it must be noted that most of them are very old. They overcrowd the site on which they are built. They stand on bare ground, the floors are damp and cold, and the walls and fittings are dilapidated. To improve is, perhaps, to grant a new lease of life to property of a character that should not be allowed to exist in so great, wealthy, and prosperous a town. Better by far secure the condemnation of entire areas of this bad, unwholesome property, pull everything down, and build anew according to modern sanitary principles. But in the present frame of mind of the Mnachester Town Council and perhaps also of the Manchester electorate there is little or no chance that such sweeping measures will meet with approval. The law offers good excuse for deferring any such action. If slums cannot be pulled down and sanitary dwellings erected in their stead without imposing a permanent burden on the ratepayers, the Housing of the Working Classes Act is likely to remain a dead letter. But more light is required on this subject. Some statement should be issued setting forth what the property in the condemned areas was really worth and what was actually paid in legal costs and in compensation. Nor does it seem fair that the value of slum property should be estimated by the amount of rent paid by the tenants. It is notorious that the rents paid by the poor are exorbitant and altogether in excess of the accommodation they receive. In a respectable middle-class house or villa, the same amount of accommodation, the same cubic space, can be rented for half or a quarter the price. The value of slum property should not be based on the number of tenants who can be crowded into a small space; this would be the offering of a premium to overcrowding. It would be more equitable to take as a standard a good house in a well-to-do quarter and calculate how many cubic feet of internal space is given. If the rent of this good, high-class house is £50 a year, and if the house in the condemned area contains only half the cubic space, then its value should be estimated at £25 a year. There should be a costless method of ascertaining the value of slum property. If the method just suggested is not thought practical then a radius might be drawn round the condemned area. This radius should comprise a district where the value of house property is proportionately the same or where the price of the land is the same. Then, measuring the cubic capacity of both the high-class and low-class dwellings within this radius, by comparing them with the total rental, it could be ascertained what was the average rental value per cubic foot of internal space of the houses in the district. Subsequently it would only be necessary to measure the cubic capacity of the houses in the condemned area to ascertain what should be their rent value according to the average of the district. Compensation estimated at so many years' purchase would

TOMB OF LOUIS PASTEUR AT THE INSTITUT PASTEUR.

Photographed by Professor Marey, J. E. Pozzi, and Pirou, at the Physiological Laboratory, Paris.

be given in keeping with the result of this measurement. There would be no need of arbitration. Each owner would receive the average value of house space in his neighbourhood. If, as would undoubtedly often be the case, this sum represented less than he had been in the habit of extorting from his helpless, poor, overcrowded tenants, such an unwholesome condition of things need not be taken into consideration by the law. Because unscrupulous slum-property owners overcrowd their houses and overcharge their tenants, that is no reason why the community at large should be taxed to compensate them for these extortions. The public can only be called upon to pay the just value of the property which for the public good is about to be destroyed. That just value can be ascertained by establishing a comparison with surrounding property which is not slum-property. To pay more than this renders sanitary improvement difficult, if not impossible, and offers a premium to those who exploit the extreme poor and cause them to crowd together in unwholesome and immoral surroundings.

THE TOMB OF LOUIS PASTEUR.

LAST week we published an account of the imposing ceremony of the removal of the remains of M. Pasteur to their final resting-place at the Pasteur Institute. This week we are able to present to our readers a description of the tomb and, through the kindness of Monsieur J. B. Pasteur, a reproduction of a photograph of the mausoleum of the great French *savant*. This tomb ought to be visited by every medical man who has an opportunity of doing so, not only on account of Pasteur's great services rendered, directly and indirectly, to medicine and surgery; not only on account of the great interest attached to a visit to the laboratories of the Institute, which may be made at the same time, but because the mausoleum is well worth seeing as a beautiful work of art, exquisite in taste and design and perfect in the finish of the workmanship. The Pasteur Institute is an imposing building situated in its own grounds in the Rue Dutot, but as it may not be easy for those to whom Paris is not well known to find it the best plan is to drive there; a carriage from the Place de la Concorde will reach it in about half an hour.

The mausoleum is built at the end of a long corridor in the Institute and is shut off by magnificent gates of wrought iron. Before describing it, it is interesting to note that it was built by the Pasteur family, and Monsieur J. B. Pasteur, the son of the great *savant*, suggested as a model the well-known tomb of Galla Placidia at Ravenna, which he had visited in the course of his travels in Italy.

This tomb was built about 440 by the Christian Empress Placidia, the daughter of Theodosius the Great. It is in the form of a Latin cross 49 ft. long and 41 ft. broad, and we may refer to it in some detail to show how it inspired the architect of Pasteur's tomb, Monsieur Girault. The interior of Placidia's tomb is covered by mosaics, on a blue ground. Above the entrance are garlands of fruit and foliage; and in the dome the symbols of the Evangelists. In the four arches which support the dome are figures of eight apostles, and between them is seen the familiar representation in mosaics of doves drinking out of a vase. Under the vaulting of the right and left transept are the other apostles and, between them, stags drinking at a spring in the midst of golden foliage. There are also designs in mosaic of branches of vines; and two subjects, full of grace and dignity, the *chef-d'œuvres* of Christian art in the fifth century, the first representing the Good Shepherd with His sheep and the second representing the triumph of the Christian faith. The altar is constructed of oriental onyx and behind it is the large marble sarcophagus which was at one time enriched with plates of silver.

Turning now to the Pasteur mausoleum, we find the archway over the gates decorated in mosaic with irises on a gold ground, and there is also the simple inscription—"*Ici repose Pasteur*," and on either side of it the dates of his birth and death—1822 1895. Passing through the gates, the crypt is approached by a flight of nine steps of white statuary marble. The pavement of the crypt is of marble mosaic on which are represented large wreaths of laurel. The crypt is formed by four arches which support a cupola, and in the centre is placed the sarcophagus, which is carved out of a single block of dark-green porphyry. The arches are supported on four groups each of three columns, two of green porphyry and one of red, with Byzantine capitals of white marble. The walls of the crypt are lined with pavonazza, a cream-coloured marble richly veined in black, and above it are beautifully executed mosaics. On the marble which fills the arches on the right and left are inscriptions indicating Pasteur's discoveries in historical order as follows:—

1848.
Pyrsymétrie Moléculaire.
1857.
Fermentations.
1862.
Générations dites Spontanées.
1863.
Études sur le Vin.
1865.
Maladies des Vers à soie.
1871.
Études sur la Bière.
1877.
Maladies Virulentes.
1880.
Virus Vaccins.
1885.
Prophylaxie de la Rage.

Beyond the sarcophagus is an apsidal chapel containing an altar of white marble enclosed by a balustrade of the same material. Above the staircase is the following inscription from the oration delivered at the reception of Pasteur into the Academy of Science: "Heureux celui qui porte en soi un dieu, un idéal de beauté, et qui lui obéit—idéal de l'art, idéal de la science, idéal de la patrie, idéal des vertus de l'Evangile." In the apse is another inscription containing the name of the architect and other interesting particulars: "Ce monument fut élevé en MDCCCXCVI. à la mémoire de Pasteur par la piété de sa veuve et de ses enfants. Charles Louis Girault composa l'architecture et la décoration; il dirigea les travaux. Luc Olivier Merson dessina les figures de la coupole. Auguste Guilbert Martin exécuta les mosaïques."

In the mosaics are representations of fowls, cattle, sheep, and dogs, indicating Pasteur's researches on chicken cholera and attenuation of virus, on anthrax, on *clavelée* or sheep-pox, and on rabies. There are also beautiful designs of hops, vines, and mulberry trees with silkworms and moths, illustrating respectively his researches on the so-called diseases of beer and wine and on the silkworm disease. Pasteur was a devout Roman Catholic, and the religious side of his character is indicated in the mosaics by angelic figures of Faith, Hope, Charity, and Science, and, above the altar, by the figure of a dove descending, representing the Holy Spirit, and on either side the Greek letters A and Ω. At the top of the cupola light is admitted through slabs of oriental onyx.

Such is the magnificent resting-place of Louis Pasteur, and it was a happy idea that this tomb should be placed where his successors carry on his great work and where students from all parts of the world may be reminded of the example he set of a life of untiring devotion to science and humanity.

PROVIDENT DISPENSARIES AND THEIR CLAIM ON THE MEDICAL PROFESSION.

A SPECIAL meeting of the Council of the Charity Organisation Society was held on Jan. 4th at the Royal United Service Institute, Whitehall, S.W., when Mr. C. H. WARREN (secretary of the Metropolitan Provident Medical Association) read a paper on "Provident Dispensaries and their Claim on the Medical Profession." There was a good attendance.

The Earl of STAMFORD, who presided, in introducing Mr. C. H. Warren said that there had been a feeling in the medical profession against certain abuses which had arisen in connexion with medical clubs. All were agreed that the provident dispensary system was a thoroughly good one and tended in the direction of thrift and self-help.

Mr. C. H. WARREN said coöperation between provident dispensaries and hospitals might be termed the root idea of all writers and authorities on these questions for many years past. As a means towards this end an association was established some sixteen years ago. One of its objects had been and still was: "To coöperate with the governing bodies of the metropolitan hospitals in order that they might be relieved of the large number of ordinary cases of illness which at present overcrowd their out-patient departments, and also have referred to them from the provident branches cases which required special hospital treatment or were suitable for clinical instruction." How far this coöperation had been attained might be gathered from the following facts.

When the association was started there were, so far as he had been able to ascertain, about forty provident dispensaries or medical clubs worked on the provident system in the metropolis. There were now fifty-six, and in addition some of the old free dispensaries had adopted a semi provident or part-pay principle. Of these fifty-six it was scarcely possible to point to a really successful provident dispensary in the neighbourhood of a great general hospital or free dispensary. What was more, on two or three occasions provident dispensaries had been closed because of the severe competition of neighbouring hospitals or free institutions. The abuses of the hospitals' out-patient departments might be classed under two heads. First, persons were admitted who were well able to pay something for their medical treatment, and secondly, slight cases of illness were admitted which were not proper cases for hospital treatment at all, and could be as well treated at the patients' homes or in a medical man's surgery. To remedy these abuses there have been some feeble attempts on the part of the hospital authorities. In many of the hospitals the attention of the out-patients was directed, by means of posters, cards, &c., to the existence in the neighbourhood of provident dispensaries, but the numbers in the out-patient departments were not in consequence reduced.

At the Royal Free Hospital a more systematic attempt was being made in connexion with the Charity Organisation Society to deal with the matter. Here an almoner had been at work for some time inquiring into the position and circumstances of persons in the out-patient departments, with a view of transferring suitable cases to provident institutions. In furtherance of this work a provident institution has been established in Islington on the medical club system; that was, without dispensary premises, the patients attending at the medical men's surgeries when advice or medicine was required and receiving home treatment when necessary. Each case sent from the hospital was followed up and visited, and of the total cases sent about 17 per cent. had been enrolled members of the provident institutions and of the neighbouring Bloomsbury Provident Dispensary. In other hospitals the plan had been adopted of admitting only a certain number of new cases each day. So far as these efforts went they might be considered perfectly satisfactory, but he did not think the same could be said of the system of charging a fee to out-patients, which was the practice in one or two hospitals. This appeared to aggravate the evil. The neediest, and frequently most deserving cases, had to pay for what should be charity, and the well-to-do were encouraged to come under the impression that they were paying for the treatment they received. The great defect of these schemes seemed to be that they began too late—they were attempted cures rather than preventives. What was required was to keep unsuitable cases out of the hospitals rather than try to weed them out after the mischief was done. He believed one condition essential to the success of any scheme for reforming the out-patient departments was the abolition of the letter system as at present understood, and when that was accomplished to admit cases for out-patient treatment only on the recommendation of a medical man who knew the case, in connexion with some organised association, or in private practice. Something on these lines had been recently attempted by coöperation between the Metropolitan Provident Medical Association and the Hospital Saturday Fund. The results of the experiment for the first two months, from Aug. 1st to Sept. 30th, was that 464 applicants were supplied with certificate forms. Of these only 226 were returned with the medical man's opinion; the remaining 238 applicants for some reason or other did not see fit to submit themselves for examination. Of the 226 cases examined 124 were sent to chest hospitals, 74 were treated at the various dispensaries of the association, and 28 were considered suitable for treatment at general hospitals. Taking the total number of those who applied for hospital letters (464) only 152 were considered proper cases for hospital treatment. The remaining 68 per cent. had been kept away from the hospitals because of their unsuitability, and for those treated at the dispensaries the medical men had received proper remuneration. In addition to this these people had been brought into touch with provident institutions. The success or failure of such an arrangement must necessarily be judged from three points of view—that of the hospital, the medical men, and the persons treated. The numbers dealt with were at present so insignificant compared with the million or more cases which annually crowded into the out-patient departments that it was too early to get an opinion from the hospital point of view. From the medical men concerned he had received nothing but praise of the arrangements. Up to the present the provident dispensary movement had been only partially successful; one of the reasons was the lack of support from the medical profession. In the out-patient departments of hospitals persons were admitted for free treatment who were well able to pay for their medical attendance. A similar objection had been raised in the case of provident dispensaries. He was not prepared to recommend a general wage limit, which must be determined to a large extent by the district in which the dispensary is situated, and also by the scale of payments charged to members. A reasonable view of this matter appeared to have been taken by a committee under the chairmanship of Sir Spencer Wells in 1887, which consisted of twenty-five medical men and eleven laymen. To carry out this principle of insurance this committee made the following recommendations:—That all candidates for membership should be approved by the medical officer under whom they wished to be registered. That they should be free to benefit in four weeks from the date of joining. That the rates of contribution should be: single persons, male and female, 6*d*. per month; man and wife without children, 1*s*. per month; man and wife with children, 10*d*. per month; children under sixteen years of age, 3*d*. per month each, not charging for more than four in one family. That applicants for membership must make a declaration that their average earnings do not exceed, in the case of a single person, or man and wife, 30*s*. per week, or of a family 40*s*. per week. The committee were of opinion that provident dispensaries established with this scale of charges and wage-limits would be supported by the medical profession and would meet the wants of the working classes. Speaking of the competition which the provident dispensaries had to meet from the medical aid societies of insurance companies, he said the principles underlying them were totally different. The medical aid society was a business concern carried on for purposes of profit, which was gained at the expense of the medical man, and without any of the safeguards attaching to the provident dispensary. In conclusion Mr. Warren said the difficulties surrounding medical practice had been largely created and were being perpetuated by the want of union in the profession, and it was only by a strong combination that these difficulties would be overcome.

Mr. G. H. BROADBENT said he came to the meeting with a verdict adverse to the practice outlined in the paper. In Manchester, where a Provident Dispensary Association had been established for over twenty-one years to promote the very objects indicated in the paper, the system had proved to be a vast abuse.

Mr. T. R. ATKINSON expressed the belief that it was the medical profession which was to blame for the wrecking of the provident system in Manchester by their apathy.

Dr. ALDERSON spoke of the abuse of medical aid societies.

Mr. A. BOUSFIELD (chairman of the Metropolitan Provident Medical Association) said he was very much in favour of properly conducted provident dispensaries within the reach of the working classes of London, and if a very slight reform took place he believed the system would admirably work in with that of the hospitals. He thought that provident institutions should be largely under the control of medical men, but difficulties would certainly be created unless all parties combined.

Dr. GUSTAVE MICHAEL strongly advocated the principles of the provident system. The insurance system aided the medical man in many ways; a wage limit was fixed, and no man was admitted unless he had been examined and passed by a medical man whom he had himself chosen. All medical matters, too, came before the medical men who were on the committee. All the profits went to the medical man, the subscriptions being divided between him and the working of the institution.

Dr. O. F. WUNDERLICH said it was the managers of hospitals who were to blame for the abuse which obtained there, and if they had to pay for the medical attendance which was given they would soon see that the abuse was put an end to.

Miss PLACE gave her experience as secretary of a provident dispensary.

Dr. BARKWELL advised medical men to have nothing whatever to do with any association where the laity sat upon a committee and dictated to them.

Dr. F. J. L. HART had every sympathy with the terms of the address, but he asked whether the system advocated was to be a compromise or whether medical men were to manage

their own affairs. He was sure they could do so if there was more unanimity among them.

Mr. GEORGE BROWN thought that the Charity Organisation Society was entitled to the thanks of the medical profession for convening a meeting in order that a matter of the most pressing importance to the profession and the public might be discussed. It might do a great deal to crystallise the subject and bring about a proper solution. The organisation, however, had not fulfilled the hopes which the profession had reposed in them when the subject was taken up. It was hoped that they would succeed in taking away patients who abused the out-patients' department of hospitals, and if possible put them into the surgeries of the private medical man. But this they had not done. He maintained that the medical profession must have absolute veto over the admission of patients into the provident dispensary. He objected to several remarks made by the writer of the address, disagreeing with the writer's idea of proper remuneration, and maintaining that patients should be taught to know that the medical men were not being adequately paid for their services.

After some remarks from Mr. ATKINSON, who favoured the general principles of the address,

Mr. TIMOTHY HOLMES explained that the provident dispensary movement set forth in the address was started, he believed, by Sir George Trevelyan and his friends a great number of years ago with the object of providing the working class with proper medical attendance on such terms as was possible and to give the greatest remuneration possible to the medical attendant. The Provident Medical Aid Association had kept the object in view, and he had no hesitation in saying that the chief obstacle of raising the standard was the action of medical men themselves in underselling each other. Supposing the remuneration at one dispensary was fixed at 6*d*., another dispensary would be started in the next street where the remuneration would be 4*d*. This was what the profession came to when it professed to manage its own affairs. If medical men would fall more generally into the ranks of the provident association and would admit the laity to a fair share of the management, he believed that they would find that they would get such remuneration as was possible out of the class of persons for whom the association existed, and they might see for themselves that no persons above that class were admitted into the association. He believed the plan proposed was entirely a fair one, and if carried out methodically it would mean a satisfactory solution of the problem, always with one most material stipulation—namely, that some reasonable arrangement could be made with the out-patient departments of hospitals. That would be possible if the medical profession and the laity would work honourably together.

Other speakers continued the discussion.

THE PLAGUE IN BOMBAY.

INFORMATION under date of Nov. 20th from Bombay brings news of the state of that city from the point of view of one of the oldest medical practitioners addressed to a friend in England. He says: "You are well out of Bombay just now, for we have fallen on troublous times. Our grand system of sewerage, the working of which the engineers refused to verify in the cocksureness that it was profoundly, and even scientifically, perfect, has landed us in an outbreak of plague. The epidemic has been with us for eight weeks and continues. Twenty attacks were reported yesterday. The plague and an increase of remittent fever and of respiratory diseases—all germ diseases—came together. The two latter have nearly doubled their usual mortality. Now, as these three have risen up and are progressing together and arise from the same cause—viz., a putrid atmosphere—you will see at once that they all come from the same source. The poison germs that enter the blood in plague, that enter the lungs in pulmonary diseases, and that enter the system in remittent fever, may all be distinctive germs, but they are bred in the same laboratory—the sewers and house connexions. All this is so plain to you that I need not say one word more. If microscopes are required to hunt for the bacilli they should be applied to the gaseous escapements from the sewers, drains, and house connexions. More than a fourth of our population have bolted from Bombay and we are all suffering from loss of business. And, lastly, there is a great famine looming in the distance." The state of the sewers and drains referred to has been the subject of much desultory inquiry and discussion in the corporation of Bombay, but so far the science of the work has received but scanty recognition from that body. This excites little surprise among those who know the quality of the average member and the method of appointing him. An Indian municipality is neither better nor worse than the similar governing bodies in England of fifty or sixty years ago, but in sanitary matters the results of mismanagement are much more palpable and severe in India than in England for reasons which may be easily explained.

Bombay has a mean temperature of 79·13° F., which is 30° higher than that of London. Its maximum recorded temperature is 100·2, with a minimum of 53·3°. The mean relative humidity is 77 per cent, while that of London is 82 per cent. at mean temperature; but when the quantity of vapour in suspension of the two places is compared, the London atmosphere would contain 0·51 lb. per 1000 cubic feet, while Bombay would have 1·135 lb.

In England the temperature of main sewers is generally under 55° F., so low, in fact, as to greatly retard putrefaction; and visitors to the London sewers are often surprised at the absence of foul smells, which they usually expect to meet underground. In Bombay the lowest recorded temperature in the main sewer in the cold season was 75·2°. In the summer the water-supply enters the city at from 82° to 84°. It will therefore be no matter of surprise if the sewage should be the foulest in the whole world, or that dead organic matter, whether animal or vegetable, begins to decay immediately, and putrefaction follows rapidly in Bombay.

The difficulties of sanitary administration arise from the rapidity of decomposition of organic matter, the density of population, and the primitive habits of the people, which have never been brought in line with the necessities of a closely inhabited town having in certain wards a density of 760 per acre. In addition to the fixed population there is a constant current of immigrants coming from the mainland, mostly of the labouring class, who remain for a time to benefit by the well-paid labour of the city and who return to agricultural occupations. These people know nothing of sewers, latrines, waterworks, or conservancy regulations. They seek lodgings in the densely crowded parts of the town, and the men will often join, eight together, in the hire of a single room, ten feet square and eight feet high, in which they will sleep together with door and window-shutter closed during the rainy season. In a city with the climatic condition of Bombay, and with such a dense population, the sanitary rules should be stricter and the individual compliance with them more complete than is the case in England if the death-rate is to be kept within reasonable limits. The reverse, however, is the case and the city appears always to exist on the verge of an epidemic of some sort. The sewers were made many years ago upon English models when there was no Indian experience to go upon, and the water-supply has been increased to meet the wasteful habits of the people until, at times, the sewers will not carry the volume flowing into them. There are thus extreme fluctuations of volume of the sewer air which is expelled with every rise of the water. This air is exceedingly foul, and must of necessity always be so on account of the temperature of the sewers, and as the fundamental data for the proper ventilation of Indian sewers have not yet been properly worked out the state of the atmosphere at ground level along the line of sewers is anything but wholesome. No analysis has ever been made of the sewer gases of Bombay, although many deaths have taken place of labourers who have had to work in them.

More work and better organisation would be necessary to keep an Indian city clean and wholesome than is requisite in Europe, for reasons attributable solely to climate, and when resistance, active or passive, of the native is added the task of administration becomes herculean. The health officer and the municipal engineer are regarded with tolerance, if not with open hostility, and they are often expected to do their work without that individual aid or compliance with rule on the part of citizens which is the very foundation of successful working in Europe. There is no educational standard in an Indian municipality, and it frequently happens that in the constitution of these bodies a much greater number of men is called for than the town can furnish

of the right sort. Then follows the anomaly of an active and intelligent minority doing the work of the municipality, which they must then submit to the approval or disapproval of a very incapable majority. This will explain many of the serious errors that have been made in municipal sanitation in India, and when, as in Bombay, the corporation is averse to scientific research in matters of vital importance, such as an analysis, ventilation of sewers and drains, and other works, which for successful execution must be based on local facts and figures, the prospects of public health are anything but good. The precautions of Europeans against disease, and especially that of a contagious character, are always in danger from the interference of domestic servants who belong to the lower classes and whose ideas regarding hygiene have been little influenced by their relations with Europeans. In the preparation of food, the cleansing of vessels, the frequentation of sick persons, and in the wearing of second-hand clothing of deceased persons that ought to have been destroyed the native servant is a constant, although unconscious, source of risk, although he may all the time adhere strictly to his traditions of ceremonial purity. The Europeans, as a rule, are too careless of sanitary precautions and they often suffer in consequence of their neglect of the claims of the climate.

The wholesome influence of a good water-supply seems to have been generally impressed on the native mind, but every departure from his customary habits in other respects is met with dislike and, if it involves the least extra trouble, with hostility, which makes itself felt in municipal affairs.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 7451 births and 4634 deaths were registered during the week ending Jan. 2nd. The annual rate of mortality in these towns, which had declined in the three preceding weeks from 19·4 to 17·0 per 1000, rose again last week to 22·3. In London the rate was 20·8 per 1000, while it averaged 23·3 in the thirty-two provincial towns. The lowest rates in these towns were 16·6 in Bradford, 16·8 in Croydon, 17·2 in Bristol, and 17·8 in Burnley; the highest rates were 29·6 in Birkenhead, 31·2 in Norwich, 31·4 in Cardiff, and 31·8 in Plymouth. The 4634 deaths included 436 which were referred to the principal zymotic diseases, against 357 and 279 in the two preceding weeks; of these, 106 resulted from whooping-cough, 97 from measles, 93 from diphtheria, 53 from scarlet fever, 47 from diarrhœa, and 40 from "fever" (principally enteric). The lowest death-rates from these diseases were recorded in Norwich, Halifax, Sunderland, and Portsmouth; and the highest rates in Cardiff, Plymouth, Gateshead, and Nottingham. The greatest mortality from measles occurred in Cardiff, Bradford, Gateshead, Nottingham, and Plymouth; from scarlet fever in Oldham; from whooping-cough in Birkenhead, Huddersfield, Nottingham, and Swansea; from "fever" in Gateshead; and from diarrhœa in Blackburn. The 93 deaths from diphtheria included 49 in London, 8 in West Ham, 8 in Cardiff, 8 in Birmingham, 4 in Sheffield, and 3 in Liverpool. No fatal case of small-pox was registered in any of the thirty-three towns. There were 3 small-pox patients in the Metropolitan Asylum Hospitals on Saturday last, the 2nd inst., all of whom had been admitted during the week. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 3707, against 3971, 3868, and 3763 on the three preceding Saturdays; 271 new cases were admitted during the week, against 353, 291, and 219 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 302 and 284 in the two preceding weeks, rose again to 348 last week, but were 254 below the corrected average. The causes of 88, or 1·9 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Nottingham, Manchester, Leeds, Newcastle-upon-Tyne, and in eight other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Birmingham, Liverpool, Preston, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had increased in the five preceding weeks from 20·3 to 22·1 per 1000, further rose to 22·4 during the week ending Jan. 2nd, and slightly exceeded the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 16·8 in Greenock and 19·5 in Aberdeen to 23·7 in Glasgow and 23·8 in Dundee. The 655 deaths in these towns included 60 which were referred to measles, 16 to diarrhœa, 15 to whooping-cough, 5 to scarlet fever, 4 to diphtheria, and 3 to "fever." In all, 103 deaths resulted from these principal zymotic diseases, against 95 and 106 in the two preceding weeks. These 103 deaths were equal to an annual rate of 3·5 per 1000, which was 1·2 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had been 37, 54, and 48 in the three preceding weeks, rose again to 60 last week, of which 44 occurred in Glasgow, 9 in Aberdeen, and 4 in Paisley. The deaths referred to whooping-cough, which had been 7 and 26 in the two preceding weeks, declined to 15 last week, and included 12 in Glasgow. The 5 fatal cases of scarlet fever showed a decline of 3 from the number in the preceding week, and included 2 in Glasgow. The deaths from diphtheria, which had been 7 and 4 in the two preceding weeks, were again 4 last week, of which 2 occurred in Edinburgh. The deaths referred to diseases of the respiratory organs in these towns, which had been 121 and 152 in the two preceding weeks, were 151 last week, and slightly exceeded the number in the corresponding period of last year. The causes of 50, or nearly 8 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 27·3 and 26·5 per 1000 in the two preceding weeks, rose again to 44·1 during the week ending Jan. 2nd. During the fourteen weeks of the quarter ending on Saturday last the death-rate in the city averaged 27·6 per 1000, the rate during the same period being 18·1 in London and 17·8 in Edinburgh. The 296 deaths registered in Dublin during the week under notice considerably exceeded the number in the preceding week, and included 36 which were referred to the principal zymotic diseases, against 21 in each of the two preceding weeks; of these, 23 resulted from whooping-cough, 5 from measles, 4 from diarrhœa, 3 from "fever," 1 from scarlet fever, and not one either from small-pox or diphtheria. These 36 deaths were equal to an annual rate of 5·4 per 1000, the zymotic death-rate during the same period being 1·8 in London and 2·1 in Edinburgh. The fatal cases of whooping-cough, which had increased from 4 to 15 in the three preceding weeks, further rose to 23 last week, a considerably higher number than in any preceding week during the past ten years. The 5 deaths referred to measles exceeded the number recorded in any week since February, 1894, while the mortality from scarlet fever showed a further decline from that recorded in recent weeks. The 296 deaths in Dublin last week included 75 of infants under one year of age and 62 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons considerably exceeded those registered in the preceding week. Twelve inquest cases and 9 deaths from violence were recorded; and 78, or more than a fourth, of the deaths occurred in public institutions. The causes of 23, or nearly 8 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-MAJOR-GENERAL W. NASH took over the appointment of Principal Medical Officer, Royal Victoria Hospital, Netley, from Brigade-Surgeon-Lieutenant-Colonel Fairland on the 1st inst. Surgeon-Captain R. E. Kelly is posted to Woolwich for duty, and Surgeon-Major N. Leader has assumed medical charge of the Station Hospital, Cardiff. Surgeon-Colonel R. P. Ferguson has joined at Woolwich for duty.

Surgeon-Lieutenant Howell has been placed under orders for service in India. Surgeon-Lieutenant-Colonel Henry Haldane Stokes to be Brigade-Surgeon-Lieutenant-Colonel,

vice H. T. Brown. Surgeon-Lieutenant-Colonel Reginald William Mapleton to be Brigade-Surgeon-Lieutenant Colonel, vice J. P. Rooney, promoted. Surgeon-Lieutenant J. A. Murison is placed on temporary half-pay on account of ill-health.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Major-General James Cleghorn has proceeded from Calcutta to Bombay in order to make a special report for the Indian Government upon the plague.

Surgeon-Captain G. B. Stainstreet, A.M.S., to be Personal Assistant to the Principal Medical Officer, Punjab Command, vice Surgeon-Captain J. Thomson, A.M.S., transferred to the Home Establishment. The services of Surgeon-Captain D. G. Marshall (Bengal) are replaced at the disposal of the Military Department. Surgeon-Captain J. C. S. Vaughan, Deputy Sanitary Commissioner, Western Bengal Circle, is placed on special duty in connexion with anti-cholera inoculation. Surgeon-Lieutenant E. S. Peck, on special duty under the Medical Board, is appointed to act as Deputy Sanitary Commissioner, Western Bengal Circle, during the absence, on deputation, of Surgeon-Captain J. C. S. Vaughan, or until further orders.

The Queen has approved of the following promotions:—Surgeon-Lieutenant-Colonels to be Brigade-Surgeon-Lieutenant-Colonels: *Bengal Establishment:* Joseph O'Brien, Alexander Crombie, and William Reed Murphy, D.S.O. *Bombay Establishment:* Randolph Caldecott. Surgeon-Majors to be Surgeon-Lieutenant-Colonels: *Bengal Establishment:* James Moorhead, Charles William Owen, C.M.G., C.I.E., and Gilbert Saunders Griffiths. *Madras Establishment:* William Alexander Lee and Montague Stokes Eyre. *Bombay Establishment:* Osborne Henry Channer, Edward William Young, and Hugh McCalman. Surgeon-Captains to be Surgeon-Majors: John Tasman Waddell Leslie, David Prain, Arthur Thomas Bown, Upendra Nath Mukerji, and William Locking Price. The Queen has approved of the transfer of the under-mentioned officers to the Half-pay List:—Brigade-Surgeon-Lieutenant-Colonel Woodforde Finden (Bengal Establishment); Surgeon-Lieutenant-Colonel Maurice Henry Smith (Madras Establishment); and Surgeon-Lieutenant-Colonel John Macgregor (Bombay Establishment). The Queen has approved of the resignation of Surgeon-Captain Townsend Wharton Shaw (Bombay Establishment).—*London Gazette.*

NAVAL MEDICAL SERVICES.

The following appointments are announced:—Fleet-Surgeon John Dudley to Yarmouth Hospital. Staff Surgeons: John D. Henwood to the *Empress of India;* Samuel W. Johnson to the *Devastation;* and Bassett C. E. P. Gunn to the *Flora*, for duty on the way home. Surgeons: Edward T. P. Eames to the *Karakatta;* Robert F. Bowie to the *Flora*, for duty on passage, and afterwards to the *Tauranga;* Arthur W. B. Livesay to the *Blenheim;* William Belt to the *Britannia;* Richard F. Bato to the *Halcyon;* and Edward Sutton to the *Wildfire.*

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Lieutenant H. P. Job, 4th Volunteer Battalion the Sherwood Foresters (Derbyshire Regiment), to be Surgeon-Lieutenant.

VOLUNTEER CORPS.

Artillery: 1st Cinque Ports (Eastern Division, Royal Artillery): Edward Charles McMurrogh Murphy, gent., to be Surgeon-Lieutenant. 2nd Cinque Ports (Eastern Division, Royal Artillery): Surgeon-Lieutenant C. Wiggins resigns his commission. *Rifle:* 1st Volunteer Battalion the Bedfordshire Regiment: John Wardle Bone to be Surgeon-Lieutenant. 3rd (Cambridgeshire) Volunteer Battalion the Suffolk Regiment: Surgeon-Major F. M. Beckett resigns his commission, also is permitted to retain his rank and to continue to wear the uniform of the battalion on his retirement. 1st Volunteer Battalion the East Yorkshire Regiment: Surgeon-Lieutenant-Colonel H. Thompson resigns his commission; also is permitted to retain his rank and to continue to wear the uniform of the battalion on his retirement. 2nd Volunteer Battalion the Welsh Regiment: Surgeon-Lieutenant William Frederick Brook is appointed Second Lieutenant. 1st Volunteer Battalion the King's (Shropshire Light Infantry): Francis Henry Thompson, gent., to be Surgeon-Lieutenant. 3rd Middlesex: Surgeon-Major F. Orton to be Surgeon-Lieutenant-Colonel. 2nd Volunteer Battalion the Prince of Wales's (North Staffordshire Regiment): Surgeon-Major W. G. Lowe to be Surgeon-Lieutenant-Colonel; and Surgeon-Captain H. J. Fausset to be Surgeon-Major. 1st (Renfrewshire) Volunteer Battalion Princess Louise's (Argyll and Sutherland Highlanders): John Nairn Marshall to be Surgeon-Lieutenant.

A FRENCH CRITICISM OF THE LATE ASHANTI WAR.

Under the rubric "Revue des Guerres" Surgeon-Major of the First Class P. Grivet fills twenty pages of the *Archives de Médecine et de Pharmacie Militaires* for December with an extremely appreciative and accurate account of the second English expedition against the Ashantis. His opening sentence is to the following effect:—"After an interval of twenty years England has just renewed—in the same theatre and with the same success—the experiment of that 'doctor's war,' whereof the brilliant sanitary results, vulgarised by Inspector-General L. Colin, are so often quoted. The military and political results of that rapid campaign are already well known." With the exception of the French Gaboon, continues our friendly critic, quoting Gerville-Réache, there is no more insalubrious portion of the black continent than that which was traversed by the expedition, but thanks to the admirable management anticipative as well as current, everything went off without the slightest hitch. Surgeon-Major Grivet's commendation is doubtless as just as it is generous, for it is likewise clear that when occasion arises he is capable of apportioning blame discriminately. With reference to the serge clothing, for instance, he describes the quality as indifferent and the construction as unsuitable. The stuff wore out at the elbows and knees with disgraceful rapidity, while the stiffening that had been added to the collars and cuffs caused needless irritation of the neck and wrists. The helmets, too, were far from perfect, as they failed to protect the ears and temples. The Pasteur-Chamberland filters were by no means a success. The tripods they rested on sank into the ground when the receptacles were full, and the bougies were so fragile that, even with the greatest care, they were frequently broken in cleaning. The exhaustive way in which all the details of the expedition had been worked out beforehand seems to have somewhat surprised the French critic. Amongst other things he highly extols the tin packing cases, which were hermetically constructed in two sizes to hold 45 lb. and 60 lb. respectively. Having been carefully moulded to fit the backs and shoulders of the native carriers, they could be transported with the utmost facility. The Maconachie ration, which was frequently issued and highly esteemed, likewise comes in for special mention. In conclusion Surgeon-Major Grivet expresses his surprise that a complete history of these successful operations has not as yet emanated from our army medical headquarters. It is certainly a subject for regret that the medical history of the late Ashanti expedition has not so far seen the light, but if we consider the extremely exiguous clerical staff at the disposal of the Director-General, the wonder is that reports of this description, when at length they do appear, should be so admirably compiled and edited.

DEATHS IN THE SERVICES.

Surgeon-Lieutenant-Colonel Alexander McGregor, I.M.S. (retired), recently from the effects of disease originally contracted in India. He entered the Indian Medical Service in 1872 as assistant surgeon, was promoted Surgeon-Major in 1884, and Surgeon-Lieutenant-Colonel in 1892. He served with the Punjab Frontier Force in medical charge of the 4th Punjab Cavalry. He was subsequently in medical charge of the following regiments:—5th Bengal Cavalry, at Bareilly; 2nd Goorkhas, at Dehra Doon; and the 8th Bengal Cavalry, at Nowgong. On the occurrence of the Black Mountain expedition he was selected for the medical charge of the Native Field Hospital, and at the termination of the campaign was mentioned in despatches and received the medal awarded for the expedition.

ENTERIC FEVER AT QUETTA.

We regret to learn that there has been a recrudescence of enteric fever among the European troops stationed at Quetta, our strategic post situated at an altitude of over 5000 ft. above the sea level near the entrance to the Bolan Pass in Beloochistan. The outbreak appears to be strictly confined to the garrison, not one case having occurred outside the fortifications. The total mortality from typhoid fever up to November amounted to twenty-three, distributed as follows: Ten deaths in the Lancashire Fusiliers, seven in the Border Regiment, and six, including one officer, in the Royal

Artillery. At the time of the latest report eight fresh cases of enteric fever had been admitted to the Quetta Hospital.

ARMY BOOTS.

"Marcellus," in his Military Notes in a Worcester contemporary this week, says: "The Mayor of Droitwich, Mr. H. Shirley Jones, has offered a pair of prize army boots to each of the two best recruits of the Droitwich company of volunteers." A medical officer of the battalion describes the boots to our contemporary, the *Droitwich Guardian*, in enthusiastic terms. There is not a point in military equipment of more importance to the soldier than his boots, and if Mr. H. Shirley Jones (who is a member of the medical profession), while encouraging the shooting of the Droitwich volunteers, can give the War Office authorities an improved pattern of boot he will do well.

NEW YEAR HONOURS FOR THE SERVICES.

Among the names in the list of New Year Honours will be noticed those of the Hon. William Raymond Kynsey, C.M.G., who received the honour of knighthood, and of Deputy-Surgeon Charles Benjamin Mosse, who has been made a Companion of the Order of St. Michael and St. George. The Hon. Sir William Raymond Kynsey is a retired Surgeon-Captain in the Army, a member of the Legislative Council of Ceylon, and Inspector-General of Hospitals and Asylums in that island. Deputy-Surgeon-General Charles Benjamin Mosse, C.B., C.M.G., is the superintending medical officer of Jamaica.

THE "ADMIRALTY AND HORSE GUARDS GAZETTE."

Our contemporary the *Admiralty and Horse Guards Gazette* announces that its first number for the New Year has been reduced in price to 3*d*., while the size, form, and scope of the paper remain as hitherto. In the new number there is an interesting leading article in reply to a letter from Mr. Maxim, in which he defends himself against a charge of egotism in connexion with his recent lecture on "The Automatic System of Firearms, its History and Development."

MOVEMENTS OF TROOPS.

Notification has been received intimating the departure of the transport *Britannia* from Bombay and the transport *Cephalonia* from China and Straits Settlements with the under-mentioned invalids for Netley: *Britannia*, 145; *Cephalonia*—from China 33, and from Straits Settlements 12, making a total of 45.

Correspondence.

"Audi alteram partem."

A QUESTION OF COPYRIGHT AND A QUESTION OF COURTESY.

To the Editors of THE LANCET.

SIRS,—I would be pleased to have an expression through you from the members of the medical profession as to the relations of the lay publishing firms of medical journals and the profession. The request is suggested by the fact that Messrs. Wm. Wood and Co. of New York refuse to permit the editors of "The American Year-book of Medicine and Surgery" to use in their abstracts of medical progress articles and illustrations first printed in the *Medical Record* and the *American Journal of Obstetrics*. This decision seems to me to be wrong for the following reasons:—

1. It prevents the dissemination of medical knowledge. The "Year-book" condenses, systematises, and criticises the year's medical work in a shorter space and more permanent manner than the journals and has thousands of readers no single journal can claim or hope to reach. Every physician writes and publishes articles in order that every member of the profession may, if possible, learn of his work and that science and progress may thus be furthered and humanity benefited. To interfere with such dissemination of our literature in reputable publications is, I think, discourteous and unjust to the profession and an injury to medical science.

2. This injustice and injury to medicine become all the more striking when physicians do not receive a cent of pay for contributions, from the publication of which the lay-publisher is supposed to make considerable financial profit.

3. No other publishers in the world, not even those who pay authors for their contributions, have in the least objected to our reproduction of quotations, abstracts, and illustrations from their journals.

Does the medical profession wish to limit the dissemination of contributions to medical science by such an exclusion of them on the part of publishers from reputable publications? *Is this literature the property of the author and of the profession or not?* Does your gift of it to a journal make it the private property of the publishers of that journal? Is it not rather a loan for temporary use only? Will you not hereafter demand that there be printed with your article a statement that the right of abstracting the text or reproducing illustrations is guaranteed?

I am, Sirs, sincerely yours,
GEO. M. GOULD.

South Seventeenth-street, Philadelphia, Pa., Dec., 1896.

*** As far as British copyright is concerned, Dr. Gould's letter confuses questions of courtesy with questions of law. Unless author and editor or publisher or proprietor or any necessary combination of them contract themselves out of its operation their mutual relations are definitely regulated by law. The literary property upon publication becomes so vested that the author cannot republish or sanction re-issue of the work without the proprietor's permission, nor can the proprietor do so without the author's permission. By courtesy on each side or by special business arrangement all proper facilities for re-issue are usually given.—ED. L.

"THE TRAINING OF NURSES IN RELATION TO REGISTRATION."

To the Editors of THE LANCET.

SIRS,—I note in THE LANCET of Jan. 2nd that, in light of the facts placed before you by Dr. Outterson Wood, you reverse the verdict previously given in favour of those who are opposed to the admission of certificated asylum attendants to the Royal British Nurses' Association. I trust you will permit me, with your usual impartiality, to criticise the facts in question and Dr. Wood's method of handling them. In stating that the feeling of anxiety with regard to his scheme is limited to a small minority Dr. Wood takes it for granted that his opponents are those, and those alone, who have in the past disapproved of various matters in connexion with the management of the association. This is not so. I myself have been seldom in agreement with the dissatisfied members, particularly as regards their methods of expressing dissatisfaction, and there are many members who have hitherto been thick and thin supporters of the managers of the association who feel that in the matter under discussion they must reluctantly rank themselves on the other side. The reason is not far to seek. The question at issue is not one of domestic management, but involves a reversal of the fundamental policy of the association. It is a question, moreover, which the general nurse has little difficulty in grasping, since it appeals directly to her sense of self-preservation. It is well known that any woman who pleases to do so can at present wear a uniform and call herself a sick nurse. Indeed, incompletely trained women are competing with fully-trained nurses to an extent which is only realised by those having business in the byways of nursing work. In these circumstances, and when competition was even less acute than at present, the Royal British Nurses' Association was formed as a protection both for the public and the general nurse. The very purpose of its existence would therefore be destroyed by admitting incompletely trained nurses to its register. The principle is bad, and, consequently, it is unnecessary to withhold criticism until "the details have been discussed by the executive committee."

It is necessary to emphasise the fact that arguments in favour of the scheme which deal with the thoroughness of asylum training are immaterial, since such training, however thorough, must be incomplete. Nevertheless, in order to prevent the continued reiteration of the irrelevant argument that the certificate of the Medico-Psychological Association "can only be procured after a rigid curriculum" and "stringent examinations inferior to no examinations for hospital trained nurses, nay, vastly superior to many," I venture to quote the following significant paragraph from a severely impartial article appearing in the current number of

the *Hospital*: "After a study of the report of the committee appointed to consider the question (i.e., asylum training), and with some knowledge of the working of an asylum, we are reluctantly forced to believe that while some of the men and women holding these certificates are perfectly well equipped for their work there must be many who have little practical acquaintance with some of the most important and every-day duties of a nurse. In these cases the certificates can have little more value than the St. John's first-aid and nursing certificates."

"Properly trained and qualified mental nurses" would no doubt be benefited by association and registration. Let them, then, organise themselves. Amalgamation with general nurses would be of doubtful value to them as regards their special work, while it would do incalculable harm by destroying the distinctive position at present conferred by the Royal British Nurses' Association on its members. It is true that certain precautions are suggested to prevent confusion, but everyone having a practical knowledge of the disadvantages under which the general nurse already works must be aware that such theoretical distinctions would prove ineffective. What this confusion between incompletely and fully trained nurses means to the medical profession and the public one has only to look round to realise.

I am, Sirs, yours faithfully,

West Ham, Jan. 2nd, 1897. JOHN BIERNACKI.

VACCINATION OFFICERS AND THE PROPOSED AMENDMENT OF THE VACCINATION LAW.

To the Editors of THE LANCET.

SIRS,—I think it may interest a majority of your readers and be of advantage to many who are starting in life to relate the experience of a lifetime in the Poor-law service. After serving as deputy (being in partnership with a Poor-law surgeon in the country) for three years, I was appointed to a newly-formed district, which I worked for nine months, when the office of resident medical officer to the Birmingham Workhouse Infirmary became vacant, to which I was appointed, there being seventy-two candidates. For upwards of eight years I performed all the duties solely, which were satisfactorily done, as proved by the Local Government Blue-book and testimonials received from the board of guardians and Poor-law inspectors. The late Dr. Seaton of the Local Government Board in the year 1868 recommended to the guardians of Birmingham, and the Local Government Board adopted the recommendation, that a specialist for vaccination be appointed for the whole of the parish, devoting all his time to the duties and not to accept any other engagement. I was induced by the representations made to me of the emoluments (which proved fallacious) and the permanency of the appointment if after the first twelve months the duties were satisfactorily performed to undertake the office. I have now for twenty-eight years fulfilled the duties without any other engagements, except being a licensed teacher of vaccination appointed by the Privy Council and a supplier of vaccine to the National Vaccine Establishment, making nearly forty years' consecutive service. I am approaching the time when failure of accuracy of nerve touch and eye-sight may occur, and am now informed that although the vaccination officers who have been appointed to register the certificates issued by me, and paid by fees, are eligible for superannuation as Poor-law officials, I, the medical officer, for some reason am excluded and thus debarred from receiving a retiring pension under the Poor-law Superannuation Act. Therefore, I presume I must continue against conscience to perform duties of very grave responsibility or fail to meet the requirements of a family by being kicked out, all fame as a medical man having been knocked out by the prolonged sitting of the Royal Commission and the prejudice aroused thereby.

I am, Sirs, your obedient servant,

EDMUND ROBINSON, M.D. St. And., M.R.C.S. Eng., L.S.A.

Birmingham, January, 1897.

"ALLEGED ARSENICAL POISONING."

To the Editors of THE LANCET.

SIRS,—I am much indebted to Dr. Stevenson for his courteous reply to my communication and regret that I cannot accept his suggestion that my letter was written under a misapprehension. I carefully guarded myself by saying that I had no personal knowledge of the case and that my remarks were founded solely on the report which appeared in THE LANCET. Dr. Stevenson thinks that my criticisms must fall to the ground, but, on the contrary, they are materially strengthened by his statement that the fabric contained approximately only $\frac{1}{10\,000}$th of arsenic per square yard. The facts are perfectly simple. A specimen of linette was sent to Mr. Bernard Dyer, who found that it contained $\frac{1}{10}$th of a grain of arsenic in the square foot, or approximately $\frac{1}{9}$th of a grain in the square yard. The same linette was sent to Dr. Stevenson and Mr. W. Thomson, and they found only $\frac{1}{10\,000}$th of a grain in the square yard. A statement such as this does not require criticism, but it would be all the better for a little explanation. Then we are told that Dr. Stevenson cannot detect less than $\frac{1}{20\,000}$th of a grain of arsenic, but Dr. Luff can very readily detect $\frac{1}{5\,000}$th of a grain, and finds that even $\frac{1}{50\,000}$th of a grain produces a distinct stain. Arsenic is by no means a rare drug, and I was under the impression that its recognition, even in the most minute quantities, presented exceptionally few difficulties. Most of us have been in the habit of availing ourselves from time to time of the services of our chemical colleagues in the belief that their methods were capable of a very considerable degree of accuracy. If, however, they can get no nearer a definite result than the difference between $\frac{1}{20}$th of a grain and $\frac{1}{10\,000}$th of a grain, or between $\frac{1}{20\,000}$th of a grain and $\frac{1}{50\,000}$th of a grain, I am afraid that a severe blow will be given to our confidence in the value of expert testimony. This divergence of opinion must be capable of some explanation and cannot present such difficulties as to baffle the acumen of the distinguished authorities whom I have named.

I am, Sirs, yours faithfully,

Welbeck-street, W., Jan. 4th, 1897. WILLIAM MURRELL.

"INGUINAL ORCHECTOMY."

To the Editors of THE LANCET.

SIRS,—I am indebted to the letter of Dr. Zum Busch which appears in your current issue, and to a courteous private letter from Mr. Harold J. Stiles, the translator of Kocher's "Operative Surgery" (Edinburgh, 1895), for the information that the inguinal method of orchectomy is not a new one, but was described by Kocher some years ago. I am thus placed in the unpleasant position of having unwittingly claimed as my own what belongs to another. Professor Kocher describes his incision as follows: "A transverse incision is carried downwards and inwards over the inguinal canal a finger's breadth above and parallel to the inner half of Poupart's ligament." It will be seen that this incision does not differ essentially from the one described in my paper—"An incision of from one inch to one and and a half inches long, and slightly curved with its concavity looking downwards and outwards, is made over the external abdominal ring in the line of the spermatic cord." I trust that my paper will not be valueless if it directs increased attention to the value of Kocher's method. Mr. Stiles informs me that since he began to use it he has had no hesitation is excising tuberculous testicles in children attending his out-patient department, without admitting them to the wards at all.

I am, Sirs, yours faithfully,

Guy's Hospital, S.E., Dec. 30th, 1896. W. S. HANDLEY.

THE ISOLATION OF CASES OF TYPHUS FEVER.

To the Editors of THE LANCET.

SIRS,—Am I justified in sending typhoid fever patients to a hospital where typhus fever cases are treated in the same wards? An immediate answer will confer a favour on

Yours faithfully,

Dec. 30th, 1896. A SUBSCRIBER.

*** The propriety of sending cases of enteric fever into a ward in which typhus fever was also being treated would be regulated by special circumstances. Speaking generally, it is no doubt always wiser to treat typhus fever in a ward by itself if the means for doing so are available. There should, however, be but little risk in placing the patient in a

ward with typhus fever cases, provided (1) that the typhus fever cases represented a relatively small proportion of those under treatment; (2) that the ward was not overcrowded—i.e., possessing a minimum allowance of 144 square feet of floor space per bed, together with ample ventilation; and (3) that a reasonable amount of care was exercised over the movements of the patients when convalescent. Experience shows that if the foregoing points be insisted upon there is but small chance of harm resulting.—ED. L.

"THE NEW SYDENHAM SOCIETY'S MEDICAL LEXICON."

To the Editors of THE LANCET.

SIRS,—May I suggest the cause of the delay in bringing out the Lexicon of the New Sydenham Society? Is it because the work is in the hands of a general practitioner who has a very large and tedious practice to conduct?

I am, Sirs, yours faithfully,

Jan. 5th, 1897. M.R.C.S. Eng.

"PRIVATE HOSPITALS *v.* MEDICAL PRACTICE."

To the Editors of THE LANCET.

SIRS,—In your annotation in THE LANCET of Jan. 2nd you write that it is suggested in the prospectus of this institution that "long acquaintance on the one side and intimate technical knowledge on the other are no longer needed to bind together the patient and practitioner, nor, indeed, is any personal bond of value." I challenge you to quote a single sentence, or even a word, in the prospectus suggesting anything of the kind. Massage and electricity undoubtedly "form part," as you write, "of the well-worn armament of medical skill," and, that being so, the greater the necessity that masseurs, masseuses, and electricians should be taught their "technical knowledge" with completeness and thoroughness and by a competent teacher. That, as a rule, they have not been so taught is recognised by all practitioners who have had experience in applying these methods of treatment as well as in prescribing them (*and the two are very different*), and they alone can form an adequate idea how the most explicit directions are frequently misunderstood or carried out incorrectly or imperfectly, and what a comfort it is to know where to obtain experienced and skilled assistance. To provide such assistance and to thoroughly train masseurs and masseuses is the chief object of this institution.

I am, Sirs, yours faithfully,

THE GENERAL DIRECTOR.

The London Galvanic and Massage Hospital, Praed-street, W., Jan. 2nd, 1897.

*** Clearly this place should not be called a hospital, but a training institution for masseurs.—ED. L.

HOSPITAL ABUSE.

(BY OUR SPECIAL COMMISSIONER.)

V.—MANCHESTER (*continued*).[1]

House-to-House Inspection of Hospital Patients.—The Provident Dispensaries and the Prevention of Hospital Abuse.—Dissatisfaction among General Practitioners.

THE five principal hospitals of Manchester differ from the other hospitals I have visited in so far as they have attempted to establish a wage-limit. It is true that many general practitioners complain bitterly that this principle is very inefficiently applied. Some even go so far as to say that the measures taken do more harm than good, for they only serve to render the abuses that exist less obvious. Nevertheless, whether successful or not, I cannot help thinking that these hospitals deserve some credit for having at least attempted to deal with this question. Naturally the most important among them is the Manchester Royal Infirmary. According to the last statistics published there were in 1895 in all 4518 in-patients, 35,569 out-patients, and 1118 home patients. At the convalescent homes of Monsall and Cheadle there were 4375 patients, making a grand total of 45,580 patients, as compared with 43,458 in the year 1894. Out of this number enquiries were made into the financial circumstances of 15,931 and it was found that 584 were not entitled to claim medical relief from the hospital. These figures are given as a proof "that every effort is made to prevent an abuse of the charity."

On inquiring into the details I found that with regard to accidents the prevention of abuse depended upon the perspicacity of the nurse and the surgeon. If the patient seemed in good circumstances his name was marked with a cross and an application would be made to him for a subscription. If the patient is strong enough when his wound has been dressed to go away, he is, if apparently in good circumstances, told not to return to the hospital, but to see for further advice a private medical man. Thus it is maintained at the hospital that even in the case of accidents abuse can only arise for the first emergency, the first dressing, and that after this first care has been given then the patient is sent away or asked to subscribe. The weakness of this arrangement is obvious, for the surgeon and the nurse are not competent to detect all cases of abuse, and even where the well-to-do patient does subscribe to the hospital this is of no benefit to the medical profession. The precautions are more effective and better organised for dealing with ordinary out-patients. The latter have first to apply at an inquiry office situated close to the entrance of the hospital. Here a clerk notes down the applicant's name, age, social state, whether married or not, the number of his family, the earnings of the whole family, and his individual earnings. If he is an adult and single, but living with his family, then the circumstances of the family must be taken into consideration. After all this has been duly noted down the applicant receives an out-patient's card, which bears a number, and he is directed to the medical or surgical side and receives advice and medicine. Twice a week the list of new patients is forwarded to the Manchester Charity Organisation Society, who send their officers to inquire at the patient's home and verify the statements given as to income, &c. Should these statements prove incorrect the out-patient's card is withdrawn, marked, and sent to the hospital. If the patient, nevertheless, returns to the hospital then he must explain why he has come without a card and why he considers himself entitled to relief though the card has been withdrawn. It is then for the hospital authorities to decide whether they will make an exception in his favour and give him back his card. Should the patient refuse to give up his card to the inspector who calls upon him at his own home, the inspector writes and informs the hospital of the fact, and the medical officer's case-book which corresponds with the number on the patient's card is withdrawn from the shelf. Thus, when the patient comes and presents his card it is found that his book is missing, and this has the same meaning as if he had no card. To gain admission as an out-patient a recommendation from a subscriber is of no use, it secures no extra advantage, and at best it is but a matter of form. In-patients, however, must get a recommendation from a subscriber of at least three guineas. Twenty-five per cent. of the in-patients come from the out-patients' department, 20 per cent. come with recommendations from subscribers, and 55 per cent. are accidents, urgent cases, or re-admissions. With regard to the latter some inquiry is made at the bedside as to their means and circumstances. Then the patient, if not very poor, is asked to contribute towards his maintenance. The contributions given by the patients vary from 2*s.* to two guineas per week. Last year they amounted in all to £880.

Seeing that the work of inspection is entrusted to the Charity Organisation Society it was necessary to inquire into the detail of the operations of this association. At the very onset there arises a complication. This is not merely a Charity Organisation Society, but it is the District Provident and Charity Organisation Society of Manchester and Salford; that is to say, the work of preventing the abuse of charity is combined with the work of organising a huge provident dispensary. The theory originally propounded was at least ingenious and sounded very fair. The sick were to be divided into four categories. Those who possessed absolutely no financial resources were to be referred to the Poor-law

[1] The previous articles on this subject were published in THE LANCET on the following dates: (1) Sept. 26th, 1896, Plymouth and Devonport; (2) Oct. 10th, 1896, Exeter; (2 *continued*) Oct. 17th, 1896, Exeter; (3) Oct. 31st, 1896, St. Thomas's Hospital, London; (4) Nov. 14th, 1896, Liverpool; (4 *continued*) Nov. 21st, 1896, Liverpool; (4 *continued*) Dec. 12th, 1896, Liverpool; and (5) Jan. 2nd, 1897, Manchester.

authorities. The second category consisted of very poor persons and were sent to the hospitals. The third category were persons who, though poor, yet were able to pay a penny per week, and they were made to join the provident dispensary. If they were ill and had not joined the provident dispensary they were called upon to pay an entrance fee of five shillings and then only were they entitled to immediate medical attendance. Finally, the fourth category consisted of those who, on inquiry, were considered able to pay for a private medical man. This so-called upwards wage scheme was, however, ultimately abandoned, the excuse given being that it was too complicated. It is now thought that medical interests are sufficiently guaranteed in the Provident Dispensary by the fact that the medical officers are allowed to sit on the Board of Management. This, however, is quite another question.

To return, therefore, to the hospital patients, I found that the Charity Organisation Society do the work of inspection for the five leading hospitals of Manchester. Twice a week they receive a list of all the new patients that have applied at these hospitals and at whose homes it is desired inquiries should be made. These lists comprise annually from 50,000 to 60,000 names. The actual number of cases inspected last year was 55,000. Out of this number 21,549 cases were from the Royal Infirmary. The fact is pointed out that the concentration of the work of inspection into one hand greatly facilitates its execution. No one hospital could afford to keep a sufficiently large staff of inspectors, nor could one or two inspectors ever cover the ground in so large a place as Manchester and Salford. The wonder is how the work can be done by the five inspectors who are actually engaged upon it. Each inspector inspects simultaneously for all the five hospitals, and he only inspects in his own district, where he lives and knows every house. He is well acquainted with the rate of wages in the principal trades, mills, &c. It suffices for him to ascertain where a man works and whether he works full time to know exactly what he earns. As this method of inspection was started some twenty-one years ago the inspectors are wonderfully experienced in their duty and the task is comparatively easy, for it is only necessary to find out what is the patient's income at the time of the visit. This may often be ascertained in a few minutes, whereas if it was a case of financial charitable aid it might require half a day or more, because it would then be a matter of character, of past history, and of future prospects. For the hospitals the wages question alone need be answered.

Concerning the cost of this system of inspection the hospitals are supposed to pay half; and, on the grounds that it is a means of preventing the abuse of charity, the Charity Organisation Society pay the other half. Thus the Royal Infirmary has paid £69 for the investigation of 21,549 cases. This, it seemed to me, was a very inadequate payment; and, under the circumstances, I was not surprised to hear that the inspectors in their turn were also insufficiently paid. The senior inspector receives 30*s.* and the other inspectors 25*s.* a week. When we consider the delicate, difficult work they have to do, the tact and diplomacy they should display, and the possibilities of bribery to which they are exposed, it will be admitted that the salary given is very small. Besides, one visit does not always suffice. A patient may declare that he does not belong to a sick fund or to a trade union or that his union does not give him a sick allowance. In that case the inspector must go to the offices of the trade union or to some likely sick club to verify if this is true. Even the porters who stand at the corners of streets on the look-out for some casual employment have clubs of their own. During the last week of my stay in Manchester the inspectors visited 850 cases, or 141 in each of six days. This makes an average of twenty-eight visits per day per inspector—a wearisome and desponding work to perform. I was not surprised to hear that complaints had been made against these inspectors who it was thought by some persons treated the poor people on whom they called rather roughly. How far this complaint is justifiable or not I had no opportunity of ascertaining, but in any case it is impossible to expect all the virtues for 25*s.* a week.

The next great question is the wage limit itself. This I found to be very low—namely, 12*s.* a week for single men or women, 18*s.* for married couples, and 1*s.* 6*d.* extra for each child. Should the inspector ascertain that the patient's income is above these limits, then he must expostulate and urge that the patient is quite well enough off to pay 1*d.* a week and join the provident dispensary. Thus it will be seen that inspecting for the hospitals resolved itself into canvassing for the provident dispensary. Naturally medical men, especially those who were not attached to the dispensary staff, loudly complained, and the Royal Infirmary has now abolished the system. For this purpose it has raised the wage-limit to 15*s.* for single men or women, 21*s.* for married couples, and 1*s.* 6*d.* for each child. If this income is exceeded the inspector must withdraw the hospital card, but he must not suggest that the patient should join the provident dispensary. The inspector must not distribute circulars concerning his institution to the patients of the infirmary, but he may do so to the patients of all the other hospitals. This is undoubtedly apt to cause confusion. It was thought that the two institutions would work harmoniously together; that the provident dispensary would send to the hospitals cases for which a consultation was needed and keep away from the hospitals many of the trivial cases that encumber the out-patients' department. But in practice the provident dispensaries do not like to admit their failure to treat patients, and very generally send merely chronic and incurable cases. Or else the provident dispensary will recommend a patient to the hospital while he is paying his five shillings entrance fee in slow instalments and then take him under their charge. Sometimes, however, they admit members at once and without entrance fee.

The Royal Infirmary, by accepting as patients those who exceed the wage limit, but who contribute something towards their maintenance, naturally takes away from the Provident Dispensary many persons who otherwise would be members. The provident dispensary on its side, having no wage limit, takes in publicans, tradesmen, and others who could afford to pay a private practitioner. An amusing case was related to me of a woman who was surprised to find that her medical man called to give medical advice to her servant. On inquiry she discovered that he was one of the medical officers to the Provident Dispensary and that her servant was a member. Thereupon the woman in question also joined the Provident Dispensary and thus obtained the advice of her usual medical man, but instead of paying him 5*s.* a visit she paid 1*d.* a week, of which magnificent sum her medical adviser received half! A consulting physician also described to me how he applied at one of the offices of the Provident Dispensary, and though he wore a silk hat and frock coat, and certainly did not look poor, no objection whatsoever was raised and all the indications were given so that he might join. Another consultant told me he frequently received a guinea fee from a publican at Deansgate who at the same time was a member of the Provident Dispensary, where he went when troubled by smaller ailments. The poorer general practitioners complain bitterly that their private patients receive leaflets from the Provident Dispensary showing how much cheaper it would be to join and be attended by perhaps better-known medical men. In the face of these assertions it seemed to me a strange anomaly to find that, though the Provident Dispensary is accused of committing many abuses, this organisation should have been entrusted with the mission of preventing the abuse of hospitals. Many of the new medical men in Manchester commenced practice under the auspices of the Provident Dispensary; their object being to gain popularity and to lay the foundations of a private practice they were not likely to prevent abuses. It was in their interest to increase the number of members on their list, and thus abuses inevitably arose The hospitals, instead of going to this institution to help in the prevention of abuses, would act more consistently if they constituted a central hospital board and employed their own inspectors.

It has been suggested that in the same way there should be but one subscription list, and that instead of each hospital incurring very great expense in collecting money one single staff under a central board would suffice for all the hospitals. This, it is true, would destroy the special spirit that animates the patrons and subscribers of each hospital—the sort of fatherly interest they take in their favourite hospital—and thus perhaps lower the sum total of the subscriptions. Doubtless there is much truth in this objection; but whatever may be said with regard to the collection of subscriptions it is only by collective action that a method of inspection can be efficaciously and economically carried out. As it is, even with the 50,000 to 60,000 visits paid per annum by inspectors organised from one common centre there is a large class of patients who altogether escape control. The inspectors cannot possibly go beyond the limits of the

boroughs of Manchester and Salford. If a patient comes from beyond the hospitals must trust to his statements. Some years ago an inspector was appointed to investigate these country cases, but the distances were enormous and the cost of travelling so great that it was impossible to visit a fair proportion of the cases. Then the hospital authorities wrote to the clergy, the registrar, and the relieving officers of these distant rural and urban districts to inquire concerning the financial position of patients who had come from their neighbourhood; but, as a rule, no answer was sent. This is all the more awkward as Manchester is the centre of the largest working population of the United Kingdom, and from all the surrounding manufacturing centres and towns patients come pouring in upon the Manchester special and general hospitals. It is always so easy to get a train to Manchester. On the other hand, the very fact that patients come from such distances as, for instance, Rochdale, Bolton, Derby, Windermere, &c., proves that they are not very poor. The railway fare often costs much more than the local practitioner's fee. At the Royal Infirmary, when the clerk, on questioning these patients who come from a distance, finds that they are not poor he makes them pay a 6*d*. or 1*s*. fee before allowing them to obtain advice. This, again, is very good for the hospital, but it is of no help to the medical profession. A patient who could pay a medical man is thus lost so far as the economic interests of the profession are concerned.

Such facts show how widespread an organisation is needed so that an effective control can be established. Not only is it necessary to have a perfect system of inspection within the town, but there should be some established authority in all outlying districts to whom application could be made by town hospitals for information concerning patients that come from these distant districts. Nothing of the sort exists at present and it could only be established by some very powerful organisation, such as a federation of hospital boards or a medical union which counted in its ranks the immense majority of the members of the medical profession. This end is far from attained at present; yet it must be acknowledged that the medical men of Manchester have made several notable efforts to organise the profession. Apart from the local branch of the British Medical Association special bodies have been constituted, such as the Medico-Ethical Association and the Medical Guild. Even the medical men employed by the provident dispensaries have formed themselves into an association which of late has shown signs of awakening. The Provident Dispensary has ten district dispensaries or branch establishments, more than 20,000 members, and employs thirty medical officers. One of these medical officers, Mr. G. H. Broadbent, has been most active in the denunciation of abuses. In the Ethical Section at the annual meeting of the British Medical Association, held at Carlisle (1896), Mr. Broadbent read a paper on the Manchester Provident Dispensaries, which he accused of sweating profits and creating a reserve fund of £1450 out of the labour of its medical officers. The dispensary also sapped the practice of general practitioners to the extent of thousands of pounds by accepting as members people who could well afford to pay ordinary medical fees. Mr. Broadbent related that two years after this provident dispensary had first been established on the upward wage system, which I have already explained, about seventeen medical men had joined. They soon found, however, that unsuitable persons were allowed to become members, so the medical officers decided to resign in a body. The Provident Dispensary thereupon imported two new medical officers and gave them a guarantee for a fixed income. With good management and the aid of these two medical officers the dispensary proved a success, grew, and has now branch establishments. Mr. Broadbent adds: "These provident dispensaries have not picked up those they were intended for. And why? Is it not likely that that mighty man, the collector, will prefer to go for his money to people who always have it ready, to houses that are clean rather than to those which are dirty, where payments are not made regularly? And will it not be more agreeable to the medical men to go to clean, respectable houses, even if they are robbing their fellow practitioners of their legitimate patients? Cases have been known where medical officers have paid the collector a commission for increasing the number of cases on their list."

Nevertheless, and as already remarked, the medical men in the service of this dispensary are awakening, for in the course of the year 1895 the Manchester and Salford Provident Dispensaries and Medical Officers' Association met and unanimously passed the following resolution:—

"That this meeting of the Association of the Medical Officers to the Manchester and Salford Provident Dispensaries protests in the most earnest manner against the methods of propagating the provident dispensary system by advertising and canvassing practised by some of the committees of the branch. Such methods are directly opposed to the ethics of the medical profession and are not calculated to promote the real welfare of the dispensaries, and if persisted in will make it impossible for any self-respecting medical officer to retain his connexion."

In the face of this resolution and of these denunciations I cannot but repeat that it does seem strange that the hospitals of Manchester should have called upon this very institution to help them to check abuses. Yet such is the fact, and it is fully set forth in the "Twenty-first Annual Report of the Manchester and Salford Provident Dispensaries Association" (1895). On page 12 this report states:—

"The payments from subscriptions, sick fees, and entrance fees of the members of the several dispensaries amounted during the year to £4422 9*s*. 9*d*., and the sum paid to the medical staff was £2612 15*s*. 11*d*., as compared with payments of £4383 17*s*. 10*d*. in 1894, when £2600 15*s*. 6*d*. was paid to the medical staff."

Then on the very next page appears the following statement:—

"The officers of the District Provident Society report that the investigations conducted by them into the circumstances of the applicants for charitable medical relief at the various hospitals in connexion with the association have been continued during the past year, the number of cases received for investigation being slightly in excess of those for 1894. The percentage of those found to be entitled to gratuitous medical treatment was 93·84, being out of the total number visited 2·02 less than in 1894. At the Royal Infirmary the percentages of those who were found to be able to subscribe to a provident dispensary have been as follows:—1891, 9 per cent.; 1892, 6 per cent.; 1893 5 per cent.; 1894, 3 per cent.; 1895, 4 per cent. At the Clinical Hospital the percentages have been as follows:—1891, 7 per cent.; 1892, 6 per cent.; 1893, 4 per cent.; 1894, 3 per cent.; 1895, 6 per cent. At the Children's Hospital the percentages have been as follows:—1891, 9 per cent.; 1892, 7 per cent.; 1893, 8 per cent.; 1894, 7 per cent.; 1895, 9 per cent. At the Ancoats Hospital the percentages have been as follows:—1891, 4 per cent.; 1892 and 1893, 3 per cent.; 1894, 2 per cent.; 1895, 6 per cent."

Finally, the report concludes by giving a table which shows "the percentages from year to year of those applicants to the medical charities coöperating with this association who were found, on investigation, to be ineligible for gratuitous medical relief, and who were in consequence referred to the Branch Provident Dispensaries." It was in 1875 that the system of inspection was first applied and then the proportion of ineligible cases found was truly startling, for it amounted to 42·32 per cent. of the applicants. The inspectors must have acted as a wholesome scare to the people who too freely availed themselves of medical charities, as the next year the proportion exceeding the wage limit fell to 24·50. In 1879 it further fell to 13·61 per cent. The following year the proportion rose to 14·76. Then, with some fluctuations, the percentage fell to 9·29 per cent. in 1887. After that it was always below 7 per cent., and this has continued up to the present time, excepting, however, the year 1891, when the proportion amounted to 7·49 per cent. From these figures it would appear that a very great reduction of unsuitable cases has been effected, but I found that many general practitioners challenged these figures. They pointed out that originally the wage limit was 10*s*.; then it was raised to 12*s*., and finally to 15*s*. What would be considered a proper case to-day was an improper case a few years ago. Also, the inquiry was declared to be perfunctory and of no real value. "It did more harm than good," exclaimed one general practitioner, for it conveyed the impression that precautions were employed. It was not possible that there should be so many persons in the town in receipt of such small wages. The inquiry was only a test of the patient's memory. The patient had only to repeat to the inspector the same details which he had given to the clerk of the hospital. If the applicant was able to tell the same lie twice running he secured admission as a hospital patient. Only recently one of his patients, a woman in receipt of an income of £50 a year and whose husband was earning 15*s*. a week, had been admitted into the infirmary. A warehouseman earning more than 21*s*. a week and a maidservant in the employ of a wealthy family had been quite recently accepted at the infirmary. A child had just concluded a month's treatment as an in-patient at the Children's Hospital, though her parents pay £22 a year rent and had re-furnished their house throughout at the very moment their child was in hospital. Such were some of the cases mentioned to me by different general practitioners so that I might realise that abuses still existed in spite of the inspections; they also objected to the inspectors because instead of telling the applicants who had means to call in

a general practitioner they advised them to join the Provident Dispensary. Finally, it was suggested that the proper thing would be to hold, if it were only for one day, an independent enquiry. In spite of these criticisms I cannot but think that the authorities of the Manchester hospitals have done more to prevent abuses than those of any other town I have yet visited, nevertheless it will be seen how far from perfect are the methods they have employed. Abuses undoubtedly still exist and dissatisfaction is keenly prevalent.

(To be continued.)

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Death of Alderman Clay.

ON the 14th of last month, at the special meeting of the trustees of the Manchester Royal Infirmary, Alderman Clay attacked the scheme for the rebuilding of the Royal Infirmary from the Corporation point of view with a vigour and warmth that testified to his own convictions on the matter. On the 16th he "caught a chill," pneumonia developed, and he died on the 24th ult. at the comparatively early age of fifty-six years. He was a man of great energy, much of which was devoted to municipal work. As chairman of the Improvement and Building Committee he did good service, indirectly at all events, in aid of sanitation, not more, perhaps, in the clearing and opening out of old thoroughfares and dealing with the lines of new streets than in seeing to the carrying-out of the "building by-laws," which, though cavilled at by a few, place salutary obstacles in the way of the jerry-builder. He looked at the infirmary question too exclusively from the corporation standpoint, the preservation for the city of an open space, while somewhat unmindful of the fact that it was the duty of the trustees to make the best of the property for the benefit of the patients. The alternative schemes propounded after the meeting showed, however, that he did not oppose simply for opposition's sake or from hostility to the infirmary board, but that he thought another solution of the question would be best in the interests of all. He was a power in the city council, and the large attendance at his funeral of men of all views, creeds, and parties showed how much he was respected and regretted.

"Home made Whisky."

At Darwen last week an ingenious hawker was charged with hawking and selling methylated spirits. He appeared to have been carrying on the business for more than four years. "In his rooms a quart bottle containing methylated spirits was found and also a kind of filter made of charcoal and brown paper, through which spirit diluted with water was passing. The effect was that the nauseous smell was removed." Some spirit already treated was also found. The prisoner said he had got the idea from a paper and "had carried on the business since he had lost his eyesight." His customers were chiefly women. One woman said she bought a pint of this whisky, as the prisoner called it. He told her it was for outward application, and was "good for rheumatism," but she and three other women drank it. Another said she had bought a pint of "home-made whisky" every week for the past six months. "And you are still alive?" asked the clerk. "We used to rub with it and sometimes we drank it." Another woman who had bought eight or nine pints of it had now ceased to do so "because it had made her ill." He told one man to whom he sold it that "the spirits were good for sciatica," from which he was suffering. He did not sin from want of knowledge, for he had been convicted of a similar offence at Bolton in 1893. "He now pleaded guilty, and was fined £25 and costs in each of two cases for selling and £1 and costs in two other cases for exposing the spirits. In default of payment he would be imprisoned for six months." It is not stated as to whether or not his profits enabled him to pay the fines.

Manchester Literary and Philosophical Society.

The above society is said to be the oldest, and is assuredly one of the most distinguished, of its kind. In its early days its title was appropriate and characteristic of its objects, but it is questionable whether it can claim to be so now. And, indeed, we may go back to the names of Joule and Dalton as indicating the fact that physical science has brought it more renown than literature and philosophy, while now more than ever is it given up to applied science. Manchester has grown into a huge city, and most of those who care to do so live beyond its confines. The character of its membership, therefore, has altered with the times. There are fewer literary and scientific amateurs, according to a document dealing with its own archives recently issued by the society, and "while the number of members professionally engaged in scientific pursuits, either as investigators or teachers, has increased, there is a considerably smaller number engaged in business who either possess a taste for scientific knowledge themselves or are desirous of encouraging others in its pursuit." This statement ignores literature and philosophy and everything but "science," and doubtless, as the *Manchester Guardian* says, "the present council would be rather surprised by the offer of papers on the Pleasures Arising from a Survey of Nature, on the Application of Natural History to Poetry, or even by those delightful illustrations of Sterne which were supplied by that keen critic, Dr. Ferriar." These changes are, no doubt, inevitable. Science is well represented, but literature and art have sought other abodes, while no one seems to know whither philosophy has fled.

Merchants and Adulterated Butter.

A firm of butter merchants was summoned the other day at the county police-court for "giving a false warranty relating to certain Irish butter," the prosecution being arrived at by "retrograde progression." First of all a retail dealer was summoned for selling butter containing an excess of water. He put in a warranty given by the defendant firm and the case was dismissed. The butter on analysis was found to contain 21·08 of added water. For the defence it was pleaded on behalf of the firm that the butter was purchased as pure, and unless every cask of butter sent to them was analysed it was quite impossible to discover if there had been adulteration. There is always some water in butter, and those engaged in the trade say that if there were none it would not be good, but it is difficult to arrive at what they consider the correct amount. The magistrate said it was clear that the butter contained 21·08 parts of water as stated, "whereas it should not have contained more than 17 or 18 per cent." He did not believe that the Manchester trade added water to the butter, but sold it as they received it. So the fraud, if it is a fraud, is put back a stage further to the farmer or the butter-factory. Mr. Yates imposed the minimum penalty of twenty shillings and costs.

Jan. 5th.

WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Cardiff.

THE Cardiff Health Committee have been taking into consideration the necessity for increased accommodation at the sanatorium and the borough engineer has prepared plans and estimates for a new wing which will cost approximately £20 000. It is proposed to provide for two additional male wards and one paying patient's ward. A porter's lodge is also included, although some of the members considered this unnecessary. There have recently been three interruptions in the supply of the electric light at Cardiff. The first occurred on Nov. 27th owing to a mistake made by an engine-driver, but this was rectified in three minutes. The second was on Dec. 4th and was caused by a transformer burning up. The last occurrence was on Dec. 12th, when about 4 P.M. owing to a fire at the switchboard the electric light failed throughout the districts of Cardiff. In about a quarter of an hour the greater portion of the private consumers were supplied, but it was 11 P.M. before the remainder were provided.

Erith House Home for Invalid Ladies, Torquay.

At the forty-second annual meeting, held at Torquay on Dec. 18th, the annual report showed a deficit of £178 on the past year as against a profit of £27 on the previous year. The number of ladies visiting the home has of late years steadily decreased; during the past season only twenty ladies availed themselves of its privileges, as against thirty in the previous year. The chairman said that it would be necessary to seriously consider whether the home should be carried on. It was mentioned that the institution had been advertised in various papers, but that not a single lady had been admitted as the result. Dr. Hamilton Ramsay acknowledged a vote of

thanks to the medical officer, and said that in spite of things looking dark he hoped they would avoid closing the institution. Erith House Home is doing an excellent work, and doubtless if its advantages were more widely known it would be more liberally supported.

Death of Mr. H. R. Hudson of Newport, Mon.

Mr. Henry Rochfort Hudson, L.R.C.P., L.R.C.S. Irel., of Newport, died in Ireland on Dec. 16th. Mr. Hudson was much esteemed in Newport, where he had been for over twenty years. He was public vaccinator for the Newport and St. Woolas District of the Newport Union and surgeon to several clubs. Mr. Hudson was a native of Arklow, county Wicklow; he had been in failing health for the past year, and last summer he became worse and went to Ireland. He was forty-eight years of age at the time of his death, and leaves a widow and six children, for whom great sympathy is felt.

Death of Mr. Thomas Browne Anstie, J.P., M.R.C.S. Eng., L.S.A.

Much regret is felt in Devizes at the death of Mr. T. B. Anstie, J.P., M.R.C.S. Eng., L.S.A., which occurred on Jan. 3rd. Mr. Anstie was one of the oldest inhabitants of the town and had been in practice in Devizes for over half a century, when he retired. He was a magistrate for the borough and honorary consulting surgeon to the Devizes Cottage Hospital. Mr. Anstie was educated at St. Thomas's Hospital and took the qualification of M.R.C.S. Eng. in 1841 and the L.S.A. in the following year.

Jan. 4th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh Royal Infirmary.

THE annual meeting of the subscribers to the Edinburgh Royal Infirmary was held on Monday last, the Lord Provost presiding. The annual report showed that the total number of in-patients treated during the year was 9478. Of these there were dismissed cured 3945, relieved 3482, and on other grounds 807. There died in the hospital 596. The medical and surgical cases were about equal in number. The average daily number of patients in hospital was 707, and the average time under treatment for each patient was 27·3 days. The number of deaths within forty-eight hours after admission was 150. In the out-patient department 28,110 patients had been attended to. The total ordinary receipts amounted to £30,682, which was a decrease of £403 compared with the previous year. Contributions and legacies under £100 amounted to £17,515. Regret was expressed that there had been a falling off in church collections, while contributions from employés in public works had increased. On fees from students there was a falling off of £180. The ordinary expenditure amounted to £39,282, being a decrease of £113 on that of the preceding year. The cost of maintenance was 1*s.* 6½*d.* more, and the medical expenditure 2*s.* 2¼*d.* less, per occupied bed. The cost for the year of each occupied bed was £55 11*s.* 2¾*d.*, which is 3*s.* 0¾*d.* above last year's rate. This rise was attributed to a higher contract price for butchers' meat and bread. The Lord Provost, in speaking to the report, pointed out the increase in the number of out-patients, and suggested that persons went to the infirmary for advice who ought to go to their private medical attendants. Dr. Batty Tuke raised the question of the site of the proposed new laundry and objected to its being built in Lauriston-lane. He also drew attention to the out-patient department and dwelt upon the need of increased accommodation. Miss Louisa Stevenson also spoke of the discomfort to which out-patients were exposed and held that it was of the utmost importance that a new out-patient department should be established. This led to considerable discussion and the matter was remitted to the committee of contributors. Five managers were re-elected and a second lady was also added to the board in the person of Mrs. Marcus Dodds, wife of an eminent theological professor in the Free Church College.

Annual Report of the University of Edinburgh.

During the past year the total number of matriculated students, including 188 women, was 2825. In the Faculty of Medicine there were 1421 students; of these 616 belonged to Scotland, 431 were from England and Wales, 91 from Ireland, 55 from India, 202 from British colonies, and 26 from foreign countries. The number of women attending extra-academical lectures with a view to graduation in medicine at the University was 68. The McEwan University Hall is likely to be completed and inaugurated during the coming spring. Reference is made in the report to various incidents in the history of the University during the past year, all of which have already been noticed in THE LANCET from time to time and need not now be repeated.

Dairy Prosecution in Dumfries.

An important decision in a dairy prosecution case was given in Dumfries last week. The charge was against a dairy farmer for employing in his dairy a woman who was "suffering from a dangerous infectious disorder—namely, infectious tonsillitis," and also three other women to milk, in whose families there were cases of a similar nature. The action was taken by the local sanitary authority presumably on the recommendation of their medical officer of health who was a leading witness in the case for the prosecution. Several local medical men and others appeared for the defence who seem to have taken up the position that the persons referred to were not suffering from an infectious disorder. The medical officer for Midlothian gave it as his opinion that tonsillitis, except where it existed as a symptom of scarlet fever, diphtheria, or typhoid fever, was not infectious. The sheriff dismissed the complaint and found the local authority liable in expenses.

Re-opening of Medical Classes in Edinburgh.

Most of the medical classes re-opened on Tuesday after the Christmas vacation, but it is needless to say that all the students have not yet returned to work.

University of Glasgow.

A statement showing the number of students in every one of the University faculties has just been published, together with the numbers of the previous seven years. It appears that, whereas in 1889 the number of students was 2101, in 1896 it had fallen to 1602, a diminution of 499. This decrease has been mainly amongst the arts students, the numbers in this faculty in 1889 being 996 and in 1896 571, and is, no doubt, due to the increased severity of the entrance examination and to the more severe conditions demanded of the student who desires his class attendance to count towards graduation. In medicine the numbers have fallen from 818 to 621; this is, in part, however, only an apparent decrease, as in 1889 students attending chemistry, natural history, and other medical classes, with a view to graduate in science, were counted in the faculty of medicine, whereas now they are placed in the newly-formed faculty of science. In so far as the decrease is real it appears to be due to the institution of the five years' curriculum and the increased stringency of the preliminary examination. It is generally allowed that this examination has been in certain respects too severe, and the student has now the option of taking it in two sections instead of being compelled to pass in all the subjects at a single sitting. The above figures do not include women students of whom during the present session there are 245.

Glasgow Maternity Hospital.

Mr. John Edgar, M.A., B.Sc., M.B. Glasg., Professor of Midwifery in Anderson's College Medical School, has been appointed assistant physician to the hospital, in succession to Mr. R. Jardine, M.D. Edin., promoted to be physician.

Glasgow Eastern Medical Society.

At a recent meeting of the society Professor Gairdner paid an eloquent tribute to the memory of the late Dr. Mather, first president of the society, speaking of him as a sound, honest, and honourable practitioner, careful of every rule of medical honour, and a man of fine instincts and sympathies.

Christmas at the Glasgow Infirmaries.

The annual meeting of the nurses was held on Dec. 26th, when an address was delivered by Mr. Jas. Boyd, vice-chairman of the board of management, and a musical programme, under the direction of Mr. Allan Macbeth, Principal of the Athenæum College of Music, was submitted. Afterwards the gifts for the patients from the annual Christmas tree were distributed and the visitors had an opportunity of seeing the wards, which for the most part were brightly decorated. At the Royal Infirmary there was, as usual, a meeting on New Year's Day, addresses being delivered to the nurses by the Lord Provost and others. Dr. Peace, organist

to the cathedral, together with members of his choir, gave a number of musical selections.

Glasgow Hospital Reports.

It is understood that a movement has been inaugurated with a view to collect and publish in an annual volume the most important results of clinical and pathological work at the various Glasgow hospitals. There is a general feeling in favour of the movement, and the promoters have received promises of sympathy and support from the leading physicians and surgeons. It is probable that an official statement will shortly be issued.

Aberdeen Royal Hospital for Sick Children.

The expenditure last year amounted to £2633 9*s.* 5½*d.*, 653 patients having been treated at an average daily cost of 2*s.* 3*d.* The new buildings for the accommodation of nurses (29) and servants (9) are expected to cost £3000, and the directors appeal to the generosity of the public of Aberdeen and districts for subscriptions, of which £1050 from six donors have already been intimated.

Hospital Sunday in Aberdeen.

On Sunday (Jan. 3rd) the church collections in Aberdeen for the benefit of Aberdeen Royal Infirmary amounted in the aggregate to £932 10*s.* 9*d.*, but several congregations have yet to send in a return.

Jan. 5th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Main Drainage of Dublin.

A REALLY serious effort to improve the sanitary condition of the city and to lower its death-rate is now being made by the Dublin Corporation. The main drainage works were commenced on Aug. 24th last. After prolonged delay caused by a building strike the first two contracts were undertaken by Messrs. H. and J. Martin. These cover the construction of the sewers and auxiliary works for intercepting the sewage from the river Liffey and from the smaller streams, the Toltga, Camac, and Poddle. Six gangs of men are now at work, four of these on the north quays, one at St. Michael's Hill, and one near the Kingsbridge Station. The works at present cover in the aggregate about a mile of ground, the average number of men employed being between 300 and 350. The cuttings along the quays are necessarily very deep, and many difficulties have already been encountered owing to leakage of water from the Liffey alongside. Every precaution to prevent serious interference with traffic is being taken, and at various positions, such as the southern end of Sackville-street, the sewers are being constructed in tunnels.

The Trial of the Maguires for Murder.

Two long and also strong letters have recently appeared in the Dublin daily papers in connexion with this case—one from the solicitor to the prisoners and the other from Dr. Thompson of Omagh, one of the witnesses for the defence. Mr. F. J. O'Connor reminds the public that there were two trials in which he acted for the prisoners, one at Omagh in July, and the other recently in Belfast. He then goes on to complain strongly of the expressions used at the latter trial by the Attorney-General in his opening address, in which he attributed vanity, pretension, and ignorance to the medical men—namely, Dr. Thompson of Omagh, Dr. Henry Bewley of Dublin, and Dr. Lorraine Smith of Belfast. Dr. Thompson in his letter bitterly resents the observation by the judge, Sir Peter O'Brien, to the jury that "he hoped that he (Dr. Thompson) was an honourable man and that he would be successful with his patients in the district to which he belonged." This remark seems certainly to have been, to say the least of it, uncalled for and, moreover, proved that the learned judge was not at all familiar with the north of Ireland, where Dr. Thompson has been for many years very well known and very highly esteemed.

The Funeral of the late Sir George Owens.

The funeral of the late Sir George Owens, M.D., J.P., which took place on Saturday morning, was very largely attended and testified to the high esteem in which the deceased was held by the citizens of Dublin as well as by the members of his own profession. The Lord Major, the high sheriff, Lord Ardilaun, Sir William Kaye, C.B., Sir Andrew Read, Sir Robert Forster, the Solicitor-General, the Dean of the Chapel Royal, Sir Frederick Falkiner, Sir Francis Brady, Sir William Porter, Bart., Sir Robert Sexton, D.L., &c., &c., were present, while among medical men there were the Presidents of the Royal Colleges of Physicians and Surgeons and the best-known members of the profession in Dublin.

The Sanitary State of Belfast.

At the Belfast police courts on Dec. 29th, the owner of property in Hopp's-court was summoned by the Belfast Corporation for having premises in a state injurious to health and unfit for habitation, and the magistrates made an order closing them. It is stated that there will be an appeal.

The New Infirmary for Omagh.

At a meeting of the executive committee, held on Dec. 30th (the Duke of Abercorn in the chair), it was reported that the contractor refused to take the contract on the original terms, whereupon it was decided to increase the contract by £234, which would raise it to a total of £8000, added to which the architect's fees and heating would bring the total cost of the Infirmary to £10,000. This would leave a deficit of £4000, which it is hoped that subscribers in the county of Tyrone will make up.

The Notification of Infectious Diseases.

The city corporation of Belfast at their first meeting this year adopted the Notification of Infectious Diseases Act, 1889, by 18 to 8 votes. At the same meeting it was announced that the annual death-rate, calculated on a population of 300,000, was 22·5 per 1000, the lowest for many years past. In the previous year it was 24·8, calculated on the same population. In his address, reviewing the events of the previous year, the Lord Mayor spoke of the desirability of granting a portion of the site of the present District Lunatic Asylum as a site for a general hospital, and he thought that the corporation might make a grant out of the gas profits under Section 59 of the Act of 1874, which says: "In any year in which the average price charged for gas shall not exceed 3*s.* 9*d.* per 1000 feet the surplus profits from the manufacture of gas may be applied by the corporation to public purposes." He thought there could be no more beneficent purpose to which to apply them.

Progress and Prosperity of Belfast.

Belfast has made great advances in the past year. The number of buildings for which plans were approved was 3118, as against 3011 in 1895; the number of streets constructed was eighty-five, as compared with forty-three in the previous year; and the valuation of the city has increased by over £53,000. The great shipping firm of Harland and Wolff, of which the Lord Mayor is a partner, has launched the largest amount of tonnage that has ever been produced by one firm in a year, the record including the largest vessel afloat. The five great Government dockyards of England have only produced 71,000 tons, against 81,000 tons by Harland and Wolff.

Untrained Midwives.

At an inquest held in Belfast on Dec. 21st in reference to the death of an infant a woman was examined who said that she was a housekeeper and practised as a midwife. She could read, but could not write. She attended as a midwife at the birth of the child whose death was under consideration. The child was born in a dying condition, but she did not send for a medical man, and she did not advise that one should be sent for. She could not say what was the matter with the child; at birth the infant simply gasped. She did not understand the term "artificial respiration." Dr. S. Alexander, dispensary medical man of the district in which the child died, said the father of the child and the midwife came to register the infant's death with him, and as they had no certificate he refused. Subsequently the father brought him a letter from a medical man stating that he saw the child seven hours after death and that he believed death was due to natural causes as far as he could judge from a superficial examination of the body. He (Dr. Alexander) then gave information to the police. Dr. Alexander said a large number of so-called midwives practised in Ireland without qualifications of any kind. He had reason to believe that many children who were buried as stillborn had been born alive and owing to want of proper treatment they had died and were registered as stillborn. He thought the best remedy would be to have all women

practising midwifery registered under a proper certificate. He thought the child died from asphyxia. It might have lived if medical attention had been procured. The coroner commented strongly on the fact that Belfast was overrun with a class of persons calling themselves midwives who were ignorant of the very rudiments of midwifery which they presumed to practise, and he illustrated this by the circumstance that the midwife examined in this case did not know the meaning of the word "respiration," and when he (the coroner) explained what restoring respiration artificially was she replied, "What did she know about children's ailments?" He also referred to the non-registration of stillborn children, which he thought was a serious matter. The jury found that the infant died from asphyxia, and that if medical attendance had been provided the child's life in all probability would have been saved, that the neglect on the woman's part was not criminal, and that the coroner be requested to bring the midwifery subject before the Belfast Dispensary Committee and to take such steps in the matter as he (the coroner) might consider necessary.

Jan. 5th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

A Rare Complication of Whooping-cough.

PROFESSOR BERNHARDT reports in the *Deutsche Medicinische Wochenschrift* a case where whooping-cough was complicated by spinal symptoms. A girl aged five years, who had been suffering from whooping-cough for about ten days, was after a severe paroxysm suddenly seized with tonic rigidity of the lower extremities so that walking or even standing became impossible. The power of speech and the functions of the sensory nerves continued normal. The tendon reflexes were increased and the adductor muscles of both thighs were strongly contracted. Neither fever nor cerebral symptoms were present. In the course of several weeks the child's state gradually improved so that after two months she could move her legs and flex her knee-joints fairly well, but the spasms of the muscles and the exaggeration of the reflexes continued. After four months the power of walking was regained. A year after the first illness the child was attacked with double parotitis and the spinal symptoms once more appeared, so that she could only walk with difficulty and by a succession of spasmodic movements; slight urinary troubles also developed themselves. A course of baths at the Oeynhausen springs proved beneficial, and when Professor Bernhardt saw the child some weeks ago she was able to walk, run, and jump, but the reflexes were abnormally strong and micturition was more frequent than natural. No atrophy of the muscles or other symptoms of degeneration were present. Professor Bernhardt points out that the case is probably to be classified as spastic spinal paralysis owing to myelitis caused by the specific virus of whooping-cough. He does not consider that there was hæmorrhage into the medulla because the muscular paralysis which is characteristic of this affection did not follow the spastic symptoms. He is also opposed to the view that the case might be a severe manifestation of hysteria, because the child shows no other hysterical indications whatever. Cerebral troubles complicating whooping-cough have been sometimes described, but affections of the spinal cord and the peripheral nerves are extremely rare in this disease. Möbius published two similar cases in 1889; the first occurred in a boy of three years of age who after whooping-cough suffered from a paresis of the arms, the legs, the cervical muscles, and the diaphragm. The tendon reflexes were diminished, but sensation and the functions of the brain and the intestines were normal. The lesion was evidently slight, no atrophy ensued, and all the symptoms soon disappeared; it is not improbable that the case was only one of peripheral neuritis. In the second instance a girl aged two and a half years on the sixth day of whooping-cough was seized with paresis of the legs, loss of the tendon reflexes, and incipient degeneration of the peroneal muscles. The nervous affection began with high fever, the paresis of the legs did not entirely disappear, and the case proved to be one of myelitis. It is evident, therefore, that whooping-cough is practically free from any tendency to originate affections of the spinal cord and the peripheral nerves.

The Toxins of Diphtheria and Tetanus.

Professor Brieger and Professor Boer announce in the *Deutsche Medicinische Wochenschrift* that they have succeeded in separating the toxins of diphtheria and tetanus in an amorphous form. It is easy to precipitate these toxins from their solutions by means of zinc salts, but the further treatment of the compounds formed in this way presents some difficulties, for many of the usual chemical re-agents have a destructive effect on the toxins. It would be too long to describe all the details of the rather complicated procedure, but it may be mentioned that in the preparation of the toxin the bacilli must be cultivated in a medium containing no albumin; human urine was the fluid selected. The specific toxin of diphtheria is described by the investigators as not giving the re-actions of an albumin or a peptone; it must, therefore, not be classified as an albuminous substance. Alcohol, ether, acetone, and acids destroy it, but weak alkalies do not affect it. Oxidising substances, such as potassium permanganate, also destroy the toxin, but reducing substances have no injurious influence on it even after twenty-four hours' contact. The indifference of the toxin to substances which have a reducing effect is very important, for according to the researches of Ehrlich such substances are continually produced in the organism. It appears, moreover, that the pathogenic action of the bacilli is quite different from that of the toxin. Subcutaneous injections of the bacilli produce an intense necrosis at the place of injection without the internal organs undergoing the alterations characteristic of diphtheria. It was already known that diphtheria bacilli produce local necrosis, but it is now pointed out for the first time that this necrosis depends, not on the toxins elaborated by the bacilli, but on the actual bacilli themselves.

Jan. 2nd.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Bacillus of Yellow Fever.

THE Roman Accademia di Medicina is now in possession of the monograph in which Professor Giuseppe Sanarelli, a distinguished *alumnus* of the University of Siena, founder and director of the Istituto d'Igiene Sperimentale at Montevideo, claims to have discovered the infective microbe or bacillus of yellow fever. The discovery will ere long be made *publici juris;* meanwhile, a word or two as to Dr. Sanarelli himself will not be without interest. Last year, when the first cases of the fever in an epidemic form were reported in Brazil Dr. Sanarelli repaired to the lazaretto on the island of Fleres and subjected to minute post-mortem examination every accessible victim to the disease. Having, by numerous preparations, provided himself with the *matériel* for his preliminary studies, he next proceeded to Rio Janeiro and took up his abode in the very midst of the infected locality—in a part of the city, in fact, where yellow fever is endemic. There he continued at work for two months, prosecuting his researches minutely and steadily, till he himself was struck down by the malady, remaining for a week in much danger. He recovered, however, by treatment of his own devising, and returned to his post at the Istituto d'Igiene Sperimentale at Montevideo greatly enriched in *matériel* and experience for the work he had undertaken. His year's work has resulted in the monograph above referred to, and he is now understood to be employed in supplementary investigations, the detailed account of which will, he believes, enable the profession to check his conclusions and, it is hoped, to confirm them.

The Bressa Prizes.

In terms of the will of Dr. Cesare Alessandro Bressa the Reale Accademia delle Scienze of Turin offered a prize for the best scientific work achieved by an Italian savant or inventor during the quadrennium 1893–96. The competition closed on the 31st ult. and the name of the successful competitor will in due course be announced. Another prize, under the same auspices (value 10,000 lire—that is, less income-tax, 9600 lire, or £384), offered to competitors of all nationalities (Italian members of Turin Academy being alone excluded) will be closed to competition on Dec. 31st, 1898. It will be awarded "to any savant of any nation who during the quadrennium 1895–98, in the judgement of the Academy of

Sciences of Turin, shall have made the most important or the most useful discovery, or produced the most distinguished work, in physical and experimental science, or in natural history, or in mathematics pure and applied, or in chemistry, or in pathology, or in physiology, not excluding geology, history, geography, or statistics." Intending competitors, I may add, will have to send in their names and work within the term indicated, accompanied by a letter addressed to the President of the Academy. The work must be printed, manuscript not being received, and in the event of its not gaining the prize will not be returned to its author. The Academy, I may further mention, reserves to itself the right to adjudge the prize to the savant whom it deems most worthy, even if he has not entered his name among the list of competitors. The prize has hitherto been the object of keen competition, and this will, in 1899, when the name of the successful candidate will be announced, be the eleventh award since its foundation in terms of the will of Dr. Cesare Alessandro Bressa.

The King and Dr. Baccelli.

King Humbert during Christmas week had been suffering from the familiar "cold in the head," or *costipazione di testa*, as Italians call it, and having, like all members of his family, a horror of posing as a "patient," let it run its course. On one of the last days of the year he went down for winter sport to the Latin shore, where he has a shooting-box at Castelporziano, near the site of the younger Pliny's villa, described incomparably by its *dilettante* owner. The day was very fine, the sun powerful, and His Majesty, still with the cold on him, was insufficiently clad. After some good sport in company with the Crown Prince the King, warm from the exercise and with a steady *tramontana* blowing, stopped to chat a little with an old gamekeeper just come back from South America. On returning to the Quirinal His Majesty felt he had paid for his imprudence, had several mild rigors, but would not "give in," and on the evening of the 30th ult. remained standing while receiving in audience the corps diplomatique till past midnight. On the morning of the 31st he wanted to get up to hear the customary report of his Ministers, but General Ponzio-Vaglia saw him just in time, noticed that he was still a prey to the rigors of the day previous, and prevailed on him to keep his bed. He would, however, see no one but the Queen, who remained beside him all day, at the end of which his state was such that the usual receptions of the Capo d'Anno were countermanded. By this time telegrams poured in from every European capital, the Emperor of Germany wiring twice, in affectionate urgency, for information. On the morning of the 1st inst. His Majesty's self-denying ordinance was overcome, he consented to see his physician, and, accordingly, Dr. Baccelli was in attendance at the Quirinal. The King smiled as he rose in bed to greet his medical adviser, saying, "Badi, onorevole Baccelli, che io la ricevo come amico, non come medico, perchè, grazie a Dio, sto bene, checchè ne dicano i giornali" ("You see, honourable Baccelli, I receive you as a friend, not as a physician, because, thank God, I am well, whatever the newspapers say"). The physician and ex-Minister, equal to the occasion, replied that his visit was not professional, but only to wish His Majesty a happy New Year. The King, however, detained him at his bedside for nearly half an hour, during which Dr. Baccelli (incidentally, of course) diagnosed the malady to be "rheumatic febricula," which with due attention to the "ingesta" would pass off in from two to three days, provided His Majesty kept his bed. The advice was taken; the prognosis has proved correct; no bulletin has had to be issued; and all the rumours as to the King's suffering from "pleuritis," or "pneumonia," or worse have not sufficed to cause a flutter on the Bourse.

Jan. 4th.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Quarantine against Plague.

THE continued reports of plague at Bombay and the exit of 200,000 people from that city have excited no little interest in Egypt, for it is not forgotten that this country was once its headquarters. It is true that there has been no plague in Egypt since 1845, but if it were accidentally re-introduced it might be even more difficult than was the case with cholera to eradicate it from its former haunts. No one knows quite why plague suddenly left Egypt, for it can hardly have been due entirely to the sanitary precautions of that day. Perhaps it was merely an extension of the eastward recession of the disease, which began in the latter half of the seventeenth century and helped, with other causes, to free Europe from its ravages. Quarantine may be quite unnecessary in England, protected by its insular position and by the millions spent upon the country's sanitation, but one cannot help feeling that Egypt is still somewhat like a powder magazine from which the tiniest spark has very jealously to be excluded. The quarantine regulations of 1878 against plague have just been revised by the International Board in Alexandria. In accordance with modern notions ships are divided into three classes—clean, suspected, and infected. In the case of clean ships coming from a plague-stricken port seven days must have elapsed, linen and bedding must be disinfected, and drinking-water must be renewed. Suspected ships are defined as those on which there has been plague, but not for the last nine days. Ships carrying a medical officer and a disinfecting stove will be allowed to traverse the Suez Canal in strict quarantine, while other ships will be kept long enough to disinfect clothes and personal effects and to satisfy the sanitary officer that there are no fresh cases on board. Passengers destined for Egypt will be kept under observation for two days while their effects are disinfected. Lastly, there are the infected ships, meaning those which have had a case of plague on board during the last nine days. Passengers suffering from plague must be isolated in a hospital on shore. Healthy passengers are to be divided into small groups and kept in quarantine long enough to allow eleven days to have elapsed since contact with the last case. The whole ship and its contents are to be disinfected, and, as in all other cases, the drinking water is to be renewed and the bilge water disinfected and discharged.

Quarantine against Cattle Diseases.

Recent science has made the regulations of 1881 somewhat archaic, and after three years' anxious deliberation the representatives of the Powers have now agreed on all vital points and the new measures have been applicable since Dec. 1st. The regulations against cattle plague have been made more severe and include for the first time sheep and goats. Horses and mules suspected to be suffering from glanders or farcy will be inoculated with mallein before being admitted into the country. The other chief diseases from which Egypt desires to be guarded are charbon, pleuro-pneumonia, foot-and-mouth disease, sheep pox, swine fever, and scabies.

The Lunatic Asylum.

The number of patients here has lately been reduced from 480 to 420, chiefly because many quiet patients have been allowed to go home to their friends. All the inmates are now kept out-of-doors all day, except those who are actually confined to their beds in the infirmary. Nearly five acres of desert land adjoining the asylum has already been annexed and probably more will be wanted by the Government in the future. Among recent improvements carried out this year a modern system of locks and keys has been fitted, with necessary master keys, a lift for food has been built, and a second bath-room specially for female patients has been opened. Ventilation has been further improved, some 300 new windows have been made, and many of the old apertures have been glazed to keep out the winter cold. New drains and cesspools outside the grounds are now being finished. The extra space provided by the new wards and the airing courts has already resulted in a considerable diminution in the number of accidents to patients. The gradual improvement in the treatment of excited patients since the English occupation of Egypt is noteworthy. All troublesome patients used to be manacled for years together both by day and night. Camisoles were substituted for chains in 1884, though this was considered by the native medical men to be a dangerous proceeding. A padded room was built later, and the resident physicians trusted chiefly to narcotics to tranquillise the excited. Now the padded room has been done away with, the camisoles have disappeared, and narcotics are very rarely employed. Better results are now obtained by means of outdoor occupation and exercise. Dr. Warnock's reforms, effected in less than two years, have elicited the highest praise from all English visitors, and it is greatly to his credit that his work of reformation has been carried on without European assistants and even without

any regular interpreter. It has long been known that general paralysis is rare amongst Egyptians, but when all lunatics came to be examined by an expert the disease was not infrequently found. At the present moment there is a room full of general paralytics, and in the year 1895 seventeen males and two females were admitted to the asylum, and of these nineteen paralytics fourteen were Egyptians. Another interesting point for English observers is that the number of cases of melancholia admitted in Egypt into the asylum is about five times less than the number under similar circumstances admitted in England.

Cairo, Dec. 28th, 1896.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

The Difficulty at the Adelaide Hospital.

IN a former communication[1] it was stated that the house surgeons at the Adelaide Hospital had resigned and their resignations had been accepted by the board of management, but that no details had been made public. The proceedings of the board on this matter and also in the inquiry into the charges made by Dr. Leith Napier against Professor Watson have been presented to the House of Assembly and printed. In resigning the resident staff charged Dr. Leith Napier with incompetence, but when called before the board individually declined to give evidence except as a body and when all were present, and in consequence the board accepted their resignations. Subsequently a Select Committee of the Legislative Council was appointed to inquire into the affairs of the hospital, and after some preliminaries examined Dr. Cecil Corbin, one of the late resident surgeons, who was dismissed by the board. He explained that the refusal to give evidence before the board was due to the conviction of the resident surgeons that the board, as constituted by the Government, was not an impartial tribunal, but would uphold Dr. Napier and Dr. Ramsay Smith, and as the sittings were held in private the residents would have no corroboration of their statements. Dr. Corbin charged Dr. Leith Napier with performing operations unskilfully; with coming to a decision about operations incorrectly; and with ignorance of the nature of the cases and the proper treatment necessary. He instanced, among others, a case of supra-pubic lithotomy in which the peritoneum was opened and the operation generally bungled, the patient dying from peritonitis; a case of hydatid of the liver diagnosed as multiple hydatids and treated by a large abdominal incision away from the tumour, thus allowing escape of the cyst contents into the peritoneal cavity; a case of supposed renal calculus, in which the abdomen was opened in the middle line and the left kidney dragged out through the incision and cut into, no stone was found, and Dr. Napier was proceeding to do the same with the right kidney when Professor Watson interfered; a case of amputation of the forearm, in which damaged tissues were left and the bones cut too long, and more bone had to be taken away; and another case, that of a man with a lump under the tongue, which Dr. Napier diagnosed as "rhinolith" and cut into, but found no stone, the case being probably cancer. Of course, these are only Dr. Corbin's statements, and Dr. Napier has not given his version yet. The charge made by Dr. Napier against Professor Watson, of misrepresenting a case that occurred in the hospital, was investigated by the board of management in public. The case was that of a woman aged fifty years with a femoral hernia and symptoms of strangulation. Dr. Napier asked Professor Watson to operate, but he declined. Mr. Shepherd then operated, assisted by Dr. Napier, Professor Watson looking on. The sac was found to be filled with omentum, and Mr. Shepherd and Dr. Napier passed a finger into the crural canal and could feel no bowel. A portion of the omentum was ligatured and cut off and the wound closed. The patient died. Professor Watson, meeting Dr. Rogers, a member of the board, just after the operation, expressed his disbelief in Dr. Napier's surgical competence and asked him to be present at the post-mortem examination, as he was certain that the patient would die, the strangulation not having been relieved. As to what was found at the necropsy statements differ, Dr. Napier alleging that Professor Watson's description was incorrect and that the professor attempted to mislead the spectators and misrepresent the actual facts. Professor Watson's statement is that he found the omentum fastened by sutures to the margin of the saphenous opening, adherent to the sac, and tightly stretched over the small intestines, and a loop of small intestines fifteen inches long bound down and strangulated by this omental band, which had not been freed from its attachments to and in the neck of the sac at the operation. Professor Watson, before making the necropsy, stated that he expected to find a knuckle of gut strangulated at the crural ring, and this condition he admitted was not found. Dr. Napier asserts that there was no obstruction of the bowel, and that no further operative interference was required, while Professor Watson asserts that the operation was incomplete, no attempt having been made to release the adherent omentum or pass a finger into the peritoneal cavity and discover the real condition. Dr. Ramsay Smith supported Dr. Napier's statements as to the result of the necropsy, as did also Mr. Shepherd, the operator, and Dr. Hill and Dr. Rogers, members of the board. Subsequently, Professor Watson, who was suffering from a severe cold and unable to speak, requested that he might be represented by counsel to cross-examine the witnesses and that he might call the students who were present at the necropsy and might call expert medical evidence on his behalf. These requests were refused and the board decided that Professor Watson misrepresented the facts concerning the operation, and that his action in doing so was ill-judged; that the operation was skilfully performed by Mr. Shepherd, assisted by Dr. Napier; and that the post-mortem examination fully justified the treatment by the operators. The board was of opinion that Professor Watson's remarks had been most unjust to Dr. Napier and that the best interests of the hospital required that Professor Watson be requested to immediately resign his position as honorary consulting surgeon and pathologist.

[1] THE LANCET, Nov. 7th, 1896.

Unskilful and Horrible Treatment by a Midwife.

Margaret Grainger, a midwife, was found guilty of manslaughter and sentenced to penal servitude for five years at Rockhampton, Queensland, on Sept. 15th. The facts elicited at the trial were that Grainger attended a Mrs. Day in her confinement. The labour was normal, but the placenta not coming away the midwife attempted to remove it by pulling on the cord and inverted the uterus. Still dragging on this, which she mistook for the placenta, she tore the uterus away, and the woman died from hæmorrhage and shock. The judge, in addressing the prisoner, said that the case was the most dreadful and horrible in the criminal records of the colony and that the prisoner had shown the grossest ignorance. The prisoner had acted as midwife for thirty years both in India and Queensland, and in consequence of her age the sentence was not so heavy as the judge said he would have imposed had she been a young woman.

Insanity in New South Wales.

The report of the Inspector-General of the Insane for New South Wales for 1895 shows that on Dec. 31st, 1895, there were 3720 insane persons under official cognizance, an increase of 133 during the year. Dr. Manning states that the causes which led to the unusual increase during 1892, 1893, and 1894, appear to have been still in operation in 1895. The chief moral causes of insanity during 1895, as far as can be ascertained with accuracy, were:—mental anxiety, worry, and overwork; domestic trouble; and adverse circumstances, including pecuniary difficulties. The chief physical cause was intemperance in drink. The cost to the State for each patient was £24 6*s.* 4*d.*

Leprosy in New South Wales.

The report for 1895 of the New South Wales Board of Health upon the administration of the Leprosy Act has been presented to Parliament. At the beginning of 1895, 40 persons were under detention at the lazaret. During the year 10 persons were reported to the Board as suspected lepers, and three of these were eventually detained. Five patients died and one was discharged.

A Hospital Medical Officer charged with Assault by a Hysterical Patient.

Dr. Sheldon of the Sydney Hospital was sued for £30 damages for assault at the Sydney District Court on Nov. 12th. The plaintiff, a girl slightly under twenty-one years of age, stated that from childhood she had been subject to fits and went to the Sydney Hospital for treatment. While waiting in the out-patient room she fainted, and Dr. Sheldon came to her and pressed her forehead with much

severity; she ran away, but was brought back by the doctor, who applied the electric battery and otherwise ill-used her. She suffered great pain at the time and had never been well since. Dr. Binnie, the medical superintendent, the porter, a nurse, and a constable gave evidence that the girl was suffering from hysteria and was violent and that nothing but the ordinary treatment was used. The verdict was for the defendant.

Successful Operation for Intra-peritoneal Rupture of the Bladder.

In the November number of the *Australasian Medical Gazette* Dr. Charles Ryan records a case of intra-peritoneal rupture of the bladder. The patient, when drunk, had been wrestling and was taken to the lock-up. While there he became very ill and was removed to the Melbourne Hospital, where six ounces of blood-stained urine were drawn off with a catheter. The lower abdomen was very tender and efforts to pass urine were futile. Abdominal section was performed seventeen hours after the accident. The peritoneal cavity was full of blood-stained fluid, and a rectangular tear four inches long was found in the upper part of the bladder. This was closed with a continuous suture of fine chromicised cat-gut and the peritoneum thoroughly flushed out. Perineal section was performed and the abdominal incision closed. The bladder was drained for sixteen days by a tube through the perineal wound and recovery was uneventful. Dr. Ryan believes this to be the first case of the kind brought to a successful issue in Australia.

Excision of the Clavicle.

At the last meeting of the Victoria Branch of the British Medical Association, Mr. F. D. Bird read notes of two cases in which he had excised the clavicle. The first was for sarcoma of that bone and the second was to gain access to an exostosis of the first rib. Both cases were successful and the patients had remarkably good movement of the arm, and in the second case a new clavicle had formed from the periosteum which was left.

Ankylostomiasis.

Dr. L. N. Ashworth read before the Medical Society of Queensland the notes of a typical case of ankylostomiasis completely cured by large doses of thymol, and in the discussion which followed Dr. Jefferis Turner stated that every case of this affection treated properly by this method at the Brisbane Children's Hospital had recovered; but it should be understood that the treatment must be carried out in the right way. Repeated small doses did no good and probably accustomed the worms to the drug so that subsequent large doses failed. The correct method was to empty the upper bowel by preliminary low diet and purgation and then to give a dose of thymol sufficient to kill the worms, no solid food being given on the day of treatment, the excess of drug and dead worms being removed by a saline aperient.

Nov. 24th, 1896.

Obituary.

JOSEPH BARTON CARTER, L.R.C.P. EDIN., M.R.C.S. ENG., L.S.A.

A LARGE circle of friends have learned with regret of the death on New Year's Day of Mr. J. B. Carter of Chapel-Allerton, Leeds. Mr. Carter, who qualified in 1849, was one of the oldest practitioners in Leeds. He was born in Beverley, to which place his father (who served under Lord Nelson as a surgeon in 1803) had retired. For nearly half a century Mr. Carter conducted an extensive practice in North Leeds and his loss is keenly felt by all classes of patients. His kindly, hearty manner endeared him to all and his ready sympathy and sound advice caused him to be regarded as a friend to be relied upon in all emergencies. His long hours of professional work sat but lightly on him and did not prevent his keeping up a close acquaintance with the Latin and Greek authors with which in his earlier days he was so familiar. Many who read these lines will recall occasions when amongst his professional brothers he would quote line after line of the classics as bearing upon the subject under discussion. Wonderful as it is to us nowadays, here was a man working hard in general practice, who still kept up his classical knowledge. A widow, three daughters, and three sons survive him. Two of his sons were associated with him in practice and one, also in the profession, is in practice at Shipley. Only those who knew Mr. Carter will feel how his death has made a gap in the profession not to be easily filled. He was a man liberal in hospitality, unsparing in kindness, at once a "doctor and a friend."

JOHN LEITCH, M.B., C.M. EDIN.

ON Dec. 22nd, 1896, at the early age of forty-seven years, John Leitch died at Silloth, Cumberland. As late as Dec. 19th he had been seeing patients, although quite unfit to do so by reason of cardiac failure, for which he had been under treatment. His death came as a shock to all his friends and patients. Dr. Leitch was born at Monimail Manse, his father being then parish minister of Monimail in Fife. Educated at Merchiston Castle School and the Edinburgh Academy he studied at the arts classes in St. Andrews University before going to the medical classes in Edinburgh, where he took his degree in 1871. He afterwards went several voyages to America as medical officer in the Cunard Line and later became resident surgeon at Leith Hospital. In 1872 he settled down at Silloth and remained there until the end. For many years Dr. Leitch was medical officer to the Silloth Convalescent Institution, and amongst other interests he took an active part as chairman of the School Board. His great hobby was botany, and he spent the whole of his spare time, both as a student and afterwards, in the pursuit of botanical researches. This led him to leave Silloth every year, and sometimes twice a year, for a month or more, travelling through Scotland, England, Ireland, and the Channel Islands on foot and examining the flowers of the different districts. His collections of plants are in many respects unique and perfect, and he was well known as an authority on botany. Dr. Leitch never cared to bring himself forward and never published anything other than short notes and contributions to journals, and these often anonymously. He was fond of travelling, and spent some time in Russia and Norway, where he pursued his favourite study. Dr. Leitch married a daughter of the late Rev. J. Redford of Silloth. Seven children survive him, the youngest being two years of age.

Medical News.

UNIVERSITY OF OXFORD.—At the examination for medical and surgical degrees in the Michaelmas term, 1896, the following gentlemen were successful in the subjects indicated:—

FIRST EXAMINATION.

Materia Medica.—J. M. Fortescue-Brickdale, Christchurch; A. F. S. Kent, Magdalene; C. R. Moss, Keble; and S. Welby, Trinity.
Anatomy and Physiology.—H. W. Crowe and H. S. French, Christchurch; F. O. Stoehr and S. Welby, Trinity; and J. A. Willett, University.

SECOND EXAMINATION (M.B. EXAMINATION).

H. G. L. Barlow, Trinity; A. A. Bathe, Christchurch; W. Bosanquet, New; J. S. Fairbairn, Magdalene; J. C. Fisher, Brasenose; A. L. Ormerod, New; W. Ramsden, Pembroke; J. B. Tombleson, Corpus Christi.

FOREIGN UNIVERSITY INTELLIGENCE.—*Bucharest:* Dr. Buicliu has been appointed Professor of Clinical Medicine.—*Budapest:* Dr. A. Landauer has qualified as *privat-docent* in Physiology.—*Clausenburg:* Dr. Koloman Hönez and Dr. Gerhard Rudas have qualified as *privat-docenten* of Odontology.—*Christiania:* Dr. Laache has been promoted to the ordinary professorship of Internal Medicine.—*Lille:* Dr. Surmont has been appointed to the chair of Hygiene.—*Giessen:* Dr. Robert Sommer has been promoted to the ordinary professorship of Psychiatry.—*Heidelberg:* Dr. Franz Nissl has qualified as *privat-docent* in Neurology.—*Tübingen:* Dr. Dennig has been appointed Professor of Internal Medicine.

PORTSMOUTH HOSPITAL SATURDAY.—The result of the Hospital Saturday collection at Portsmouth this year has established a record, the total sum available after paying all expenses being £1095. Of this the sum of £1030 goes to the hospitals, £15 to each of four other institutions, and £5 to a sixth.

BIRKENHEAD MEDICAL SOCIETY.—At a meeting of the above society on Dec. 11th, 1896, Dr. Sidney Marsden, president, being in the chair, Mr. Francis Johnson read notes and showed photographs and charts of the following cases:—1. Hydrops Articuli of both Knee-joints in an otherwise healthy child, treated successfully by tapping and elastic pressure. Mr. Shears drew attention to the fact that hydrops articuli is frequently seen in children suffering from congenital syphilis. 2. Lupus of the Nose and Face treated by scraping and thyroid gland and followed by great improvement. 3. A case of Herpes affecting the area of the Scalp supplied by the left great and small occipital nerves. 4. A Sporadic or Myxœdematous Cretin greatly benefited by thyroid gland. This case gave rise to an interesting discussion on the methods of administering the thyroid gland. Dr. Blood showed a set of gall-stones removed by operation from a patient who had suffered from symptoms for twelve years.

FOOTBALL CASUALTIES.—In a football match at Bristol on Dec. 25th, 1896, between St. George's and Warmley, a member of the latter team fractured his clavicle.—During a match at Weston-super-Mare on Dec. 26th, between Weston-super-Mare and Cardiff Harlequins, a member of the former team fractured his clavicle.—While a local team called the Sun Albion were playing a game at Llanerchrugog-park, Ruabon, on the 25th ult., a youth aged seventeen years (right half-back) received a severe injury to the abdomen, and was removed to his home, where he died the next day.—During the progress of a match between the Lincoln Lindum team and eleven Christmas visitors, at Lincoln, a player sustained a fracture of the right ankle.—In a match on the 31st ult., at South Shields, between the Westoe and Harrogate Rugby fifteens, a Harrogate forward sustained an injury to his right leg and was removed to the South Shields Infirmary.—While playing in a match on Saturday last at Hebden Bridge against Castleford one of the home team forwards fractured his skull and was taken to the Halifax Royal Infirmary.—A half-back, of Beeston Hill, who was injured six weeks since while playing in a match, is now lying in an unconscious state at the Leeds Infirmary, suffering from concussion of the brain.—On Saturday last, during a match between Great Harwood and Blackburn Park-road teams, a player of the home team fractured his leg.—On the same day, in a match at Widnes, a player fractured his leg; and in a match between the Shipley and Menston clubs a player, a left wing forward, sustained a fracture of the ankle.

DIPHTHERIA IN LONDON.—During the two weeks ended on Saturday, Dec. 26th, the deaths registered from diphtheria in London showed considerable difference in the sum total per week. In the first of the two weeks the deaths numbered 58, as against 43, 60, and 52 in the three weeks preceding, the 58 deaths being 18 in excess of the corrected decennial average for the fifty-first week of the period 1886–95. Of the 58 deaths, 10 belonged to Camberwell, 6 each to Lambeth and Islington, 4 to Shoreditch, and 3 each to Fulham, Chelsea, Mile End Old Town, Poplar, and Battersea sanitary areas. All but 2 of the deaths were of persons aged from one to twenty years. On the closing day of the week, Dec. 19th, there remained in the London hospitals 838 patients suffering from diphtheria. In the succeeding week, including the Christmas holidays, the registered deaths from the disease fell to 38, this total being 4 below the corrected decennial average for the week. Four of the deaths belonged to Lambeth, 3 each to St. Marylebone, Islington, and Bermondsey sanitary areas. On Saturday, Dec. 26th, 850 patients suffering from diphtheria remained in London hospitals, the admissions in the week having numbered 129. During the fortnight the deaths registered from the disease in Outer London amounted to 24, of which 12 were of persons belonging to the West Ham registration district. Thus, in Greater London in the two weeks the deaths registered from diphtheria were 120 in number. In the concluding week of the the year ended on Saturday last—the year 1896 having, for registration purposes, fifty-three weeks—the deaths registered in London as due to diphtheria rose again to 49, and were 7 above the corrected average. Islington, Lambeth, and Camberwell were each of them credited with 5 deaths, and St. Pancras and Poplar sanitary areas, each with 3 deaths. The patients in hospital on Jan. 2nd numbered 845, there having been 115 admissions during the week. The same excess of fatal incidence in the ages one to twenty years was witnessed, as is now usually seen. Outer London suffered heavily in the week, 22 deaths having been registered, of which 11 occurred in the West Ham, 4 in the Edmonton, and 3 in the Hendon registration districts, making an aggregate of 71 deaths in Greater London.

THE DIFFUSION OF SMALL-POX.—There was an entire absence of fatal small-pox in London during the fourth quarter of the past year, but three admissions to hospital were chronicled in the closing week of the year, these three patients alone remaining under treatment on Saturday last. At Redruth the epidemic seems to be quite at an end, no fresh case having been reported since mid-December, the end of the year finding only some ten patients in hospital. At Cadoxton three cases of small-pox were last week sent to hospital, the patients being the keeper of a lodging-house, his wife, and child. Importation of the disease to the house in the person of a sailor is thought to have been the probable source of infection. The cases are said to be of mild character.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

AYMER, JAMES, M.B., C.M. Aberd., has been re-appointed Medical Officer of Health by the Johnshaven Parish Council.

BENNETT, WILLIAM EDWARD, F.R.C.S. Eng., has been appointed Resident Surgical Officer to the General Hospital, Birmingham, vice C. Leedham-green.

CARRUTHERS, D. A., M.B., C.M. Edin., has been appointed Medical Officer for the Parish of Kinnoull, Perth.

EVANS, CHAS. W., M.D. Lond., M.R.C.S., has been re-appointed Medical Officer of Health by the Bakewell Urban District Council.

FORBES, DUNCAN M., L.R.C.P. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of Health, by the Eastwood Urban District Council.

FRANEY, EDWARD, M.R.C.S., has been re-appointed Medical Officer of Health by the Banbury Rural District Council.

GOLLAND, A., L.R.C.P. Edin., M.R.C.S., has been re-appointed Medical Officer of Health by the Altrincham District Council.

GREEN, C. DAVID, M.D. Lond., B.S., F.R.C.S., L.R.C.P., D.P.H., has been re-appointed Medical Officer of Health by the Edmonton Town Council.

HANSON, E. R., L.R.C.P. and S. Edin., has been appointed Medical Officer of Health for the No. 3 Sanitary District of the South Molton Union.

HARKER, W. E., M.D. Durh., B.S., has been re-appointed Medical Officer of Health by the Tyne Port Sanitary Authority.

JONES, FRED. F., M.R.C.S., D.P.H., has been re-appointed Medical Officer of Health by the Llanfyllin Urban District Council.

KEER, J. C., M.R.C.S., has been appointed Medical Officer for the Workhouse and the Wickham Market Sanitary District of the Plomesgate Union, vice G. Keer, resigned.

KNAPP, E. M. M., L.R.C.P. Edin., M.R.C.S., has been re-appointed Medical Officer of Health by the Ross Rural District Council.

LLOYD, DAVID, M.B., C.M. Glasg., has been appointed Medical Officer for the Llanrhaiadr Sanitary District of Ruthin Union, vice J. Caithness.

MACLENNAN, DONALD U., M.D., C.M. Edin., has been re-appointed Medical Officer of Health, by the Widnes Town Council.

MAPLETON, G. H., M.B., C.M. Edin., has been appointed Medical Officer by the Cranbrook Board of Guardians.

MARSH, J. H., M.R.C.S., L.R.C.P., has been appointed Medical Officer and Ambulance Lecturer to the Macclesfield School Board.

PARKINSON, THOS. W., M.B., C.M. Edin., has been re-appointed Medical Officer of Health by the Edzell Parish Council.

PEPPER, H. W., M.R.C.S., L.R.C.P., has been appointed Assistant Medical Officer to the Workhouse Infirmary, Birmingham.

PURVES, A. S., M.D., C.M. Edin., has been re-appointed Medical Officer for the Lesbury Sanitary District of the Alnwick Union.

SMYTH, WM. A., L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Sanitary District of Ashstead, Surrey.

SPRENT, W. S., L.R.C.S., L.R.C.P. Irel., has been appointed a Deputy Medical Officer by the Helmsley District Council.

TEMPLE, G. H., M.B., C.M. Edin., has been appointed Medical Officer of Health for the Weston-super-Mare Sanitary District of the Axbridge Union, vice V. Hitchins, resigned.

THOMAS, EVAN C., M.B., C.M. Edin., has been appointed Medical Officer of Health by the Lampeter (Cardigan) Rural District Council.

WALLIS, PERCY E., L.R.C.P. Edin., M.R.C.S., has been re-appointed Medical Officer of Health by the East Grinstead Urban Council.

WEBB, HENRY L., M.R.C.S., has been appointed Medical Officer of Health for the Cheadle Rural Sanitary District.

WEST, GEORGE F., L.R.C.P., L.R.C.S. Edin., has been appointed by the Lord-Lieutenant, Resident Medical Superintendent to the Kilkenny District Lunatic Asylum.

WILDE, L., M.D. Durh., L.R.C.P. Lond., M.R.C.S., D.P.H. Glasg., has been re-appointed Medical Officer of Health for Bedfordshire.

WILLIAMS, WALTER C., has been appointed Analyst for the Blackburn County Borough.

WYLLYS, HENRY J. M., L.R.C.P., L.R.C.S. Edin., has been appointed Junior House Surgeon to the Norfolk and Norwich Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Clinical Assistant.

CITY OF LONDON LYING-IN HOSPITAL, City-road, E.C.—District Surgeon.

CLEOBURY MORTIMER, ROCK, TENBURY AND BURFORD RURAL DISTRICT COUNCILS.—Medical Officer of Health for the above districts for three years. Salary £75 per annum, to include travelling and all other expenses. Applications to the Clerk, Cleobury Mortimer.

COUNTY ASYLUM, Rainhill, near Liverpool.—Assistant Medical Officer, unmarried. Salary commences at £100 per annum, with prospect of increase to £250, together with furnished apartments, board, attendance, and washing.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark-bridge road, S.E.—Senior Resident Medical Officer. Salary £70, with board and washing.

FLINTSHIRE DISPENSARY.—Resident House Surgeon. Salary £120 a year, with furnished house, rent and taxes free, also coal, light, water, and cleaning, or in lieu thereof the sum of £20 per annum. Applications to the Secretary, Board-room, Holywell, North Wales.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Physician.

LINCOLN GENERAL DISPENSARY.—Resident Medical Officer for two years. Unmarried. Salary £150 per annum, with furnished apartments, coals, and gas provided.

MIDDLESBROUGH NEW ASYLUM.—Medical Superintendent. House (unfurnished, with rates and taxes free), coal, gas, water, and washing will be allowed. Salary required to be stated.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich-road, S.E.—Resident Medical Officer for six months. Salary £30 per annum, with board, attendance, and washing.

QUEEN'S HOSPITAL, Birmingham.—Third Casualty Surgeon for three years. Honorarium £50 per annum. Also Second Physician for Out-patients, for three years. Honorarium £50 per annum.

ROYAL ALBERT HOSPITAL, Devonport.—Assistant House Surgeon, for six months. Board, lodging, and washing provided.

ROYAL HANTS COUNTY HOSPITAL, Winchester.—Assistant House Surgeon. Salary at the rate of £20 per annum, with board and lodging.

ST. GEORGE'S HOSPITAL, London, S.W.—Physician and Assistant Physician.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth.—House Surgeon. Salary £100, with board and residence.

UNIVERSITY OF EDINBURGH.—Examiners.

VICTORIA HOSPITAL FOR SICK CHILDREN, Queen's-road, Chelsea, S.W.—House Physician for twelve months. Honorarium £50, and board and lodging in the hospital provided.

Births, Marriages, and Deaths.

BIRTHS.

AUDLAND.—On Dec. 30th, at Oxford-street, Wellingborough, the wife of W. E. Audland, M.R.C.S., L.R.C.P. Lond., of a son.

CAMERON.—On Jan. 5th, at Elms-road, Clapham-common, S.W., the wife of Albert Cameron, M.B., C.M. Edin., of a daughter.

DAVIES.—On Jan. 5th, at Finsbury-square, the wife of Arthur Templer Davies, M.D. Cantab., F.R.C.P., of a daughter.

HOWARD.—On Jan. 1st, at Walworth-road, S.E., the wife of John A. Howard, M.D. Lond., of a son.

ROGERS-TILLSTONE.—On Dec. 28th, at Ditton, Maidstone, the wife of J. M. Rogers-Tillstone, M.R.C.S., L.R.C.P. Lond., of a daughter.

STANLEY.—On Jan. 4th, at Brabourne, Kent, the wife of Hubert Stanley, M.B. Cantab., M.R.C.S., L.R.C.P., of a son.

SYKES.—On Jan. 3rd, at York-road, Birkdale, Southport, the wife of J. Herbert Sykes, M.R.C.S., L.R.C.P., of a daughter.

MARRIAGES.

BARTON—FOX.—On Dec. 23rd, at the parish church, Norbiton, Percy Frederic Barton, B.A., of Camb., M.R.C.S. and L.R.C.P., to Annie S. Fox, eldest twin daughter of the Rev. Henry Elliott Fox, Hon. Sec. of the Church Missionary Society.

FERGUSON—MALONE.—On Jan. 1st, at St. Peter's, Eltham-road, Lee, George Gunnis Ferguson, M.B., C.M., of Holmdale road, West Hampstead, N.W., to Ada Bertha, daughter of the late Captain Joseph Malone, V.C., Enniskillen Dragoons.

HACKEN—MASON.—On Oct. 29th, 1896, at St. Andrew's Church, Braidwood, N.S.W., by the Rev. J. S. Dobson, Helen S., third daughter of Frank Mason, Esq., J.P., of Yately, Braidwood, to J. Preston Hocken, M.D., M.R.C.S., L.R.C.P., L.S.A., J.P., of West Wallsend, N.S.W., eldest son of J. Hocken, Esq., Liverpool, England.

DEATHS.

CARTER.—On Jan. 1st, 1897, at Elm House, Chapel Allerton, Leeds, Joseph Barton Carter, M.R.C.S., L.R.C.P., L.S.A., aged 73 years.

LEITCH.—On Dec. 22nd, at Monimail, Silloth, Cumberland, John Leitch, M.B., C.M. Edin., aged 47 years.

JAMESON.—On Jan. 1st, at his residence, Knollys-road, Streatham, Thomas Jameson, M.D., R.N., aged 59.

MACGREGOR.—On Jan. 4th, at his residence, Pembridge-villas, Southfields, S.W., Surgeon-Lieutenant-Colonel Alexander Macgregor, Indian Medical Service, Retired.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (11th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

TUESDAY (12th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (13th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY (14th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.)

FRIDAY (15th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (16th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (11th).—ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (40, Leicester-square, W.C.).—8 P.M. Communications:—Mr. H. L. Albert: Two cases of Transplantation, with a third case of Transplantation of a Root subsequently Crowned.—Mr. E. Balding, jun.: A Case of Retarded Eruption.—Mr. H. Baldwin: Cement and Amalgam Fillings. Papers:—Mr. A. Pearce Gould: Means taken to prevent subsequent Deformity after Excision of Portions of Lower Jaw.—Mr. J. H. Badcock: Copper Amalgam, its Merits and Demerits.

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. Bland Sutton: Wandering Spleens.—Dr. S. West: The Prognosis of Pneumothorax, with a series of Cases of Recovery.

TUESDAY (12th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Dr. E. C. Kingdon and Dr. J. S. R. Russell: Infantile Cerebral Degeneration, with Symmetrical Changes at the Macula.—Mr. T. S. Ellis: On some Points in the Surgical Physiology of the Foot.

WEDNESDAY (13th).—LARYNGOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—5 P.M. Annual General Meeting. Report of the Morbid Growths Committee: (1) Sarcoma of Nose; (2) Spheroidal celled Carcinoma of Vocal Cord, and Perichondral Sarcoma of the Cricoid Cartilage; (3) Rapid Destruction of Face. Cases and Specimens:—Some Presentations to the Society from Dr. Lefferts (New York) and from the President.—Dr. Semon: (1) Demonstration of Dr. Betz's plaster-of-Paris models of the Nose and its Accessory Cavities; (2) (for Dr. Macintyre) Some new Skiagraphs relating to Laryngology and Rhinology.—Dr. St. Clair Thomson (for Dr. E. Brown, Montreal): A Nasal Snare.—Dr. Kanthack: Demonstration of some Morbid Specimens—(1) Microscopic and (2) Macroscopic.—Dr. P. W. Williams (Bristol): Case of Unilateral Abductor Paralysis in a Medical Student.—Mr. C. A. Parker: Unilateral Abductor Paralysis in a Boy.—Dr. W. Permewan (Liverpool): (1) Case of Double Abductor Paralysis in a Child; (2) Drawing of a case of Tubercular Ulceration of Larynx.—Mr. de Santi: A Man with a Pharyngeal Pouch.—Dr. J. M. Hunt (Liverpool): Drawing and Microscopic Specimen of Early Malignant Disease of the Larynx.—Dr. J. Horne: Dropping of Fluid (? cerebro-spinal) from one side of the Nose. 7.45 P.M. Annual Dinner (Café Monico).

SOUTH-WEST LONDON MEDICAL SOCIETY (Town Hall, High-street, Wandsworth).—8.30 P.M. Mr. H. Marsh: Studies of Diagnosis in Difficult Cases, with illustrations.

HUNTERIAN SOCIETY (London Institution, Finsbury-circus).—8.30 P.M. Pathological Evening. Mr. Openshaw: Uterine Fibroid removed by Abdominal Hysterectomy.—Mr. Targett: Carcinoma of Body of Uterus.—Mr. F. J. Smith: Large White Kidneys. Other specimens will also be shown.

THURSDAY 14th).—SOCIETY FOR THE STUDY OF INEBRIETY (11, Chandos-street, Cavendish-square, W.)—4 P.M. Paper: Mr. J. J. Pitcairn: The Prison Treatment of Habitual Drunkards. Mr. E. T. Aydon-Smith will exhibit specimens of Japanese Opium Pipes.

BRITISH GYNÆCOLOGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Dr. Purcell: New Form of Intestinal Clamp.—Mr. Taylor (Birmingham): (1) Pan-hysterectomy by Kelly's method; (2) Sarcoma of Bladder. Annual Meeting.

FRIDAY (15th).—EPIDEMIOLOGICAL SOCIETY OF LONDON (11, Chandos-st., Cavendish-sq.).—8 P.M. Dr. Hamer: Age Incidence in Relation with Cycles of Disease Prevalence.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

TUESDAY (12th).—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—Dr. Buzzard: Clinical Demonstration.

FRIDAY (15th).—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—Dr. W. S. Colman: On Case-taking.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Jan. 7th, 1897.

Date.		Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Jan.	1	30·30	N.	46	45	57	47	45	...	Raining
,,	2	30·54	E.	35	34	42	42	34	...	Foggy
,,	3	30·41	S.	42	42	50	46	35	...	Cloudy
,,	4	30·13	S.W.	37	36	44	44	36	0·07	Cloudy
,,	5	29·95	S.W.	44	43	48	45	37	0·15	Raining
,,	6	29·71	S.E.	38	37	61	49	37	0·07	Cloudy
,,	7	29·70	S.E.	45	45	51	47	38	...	Foggy

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index for the second volume of 1896 was given in the issue of Dec. 26th last. The practice of supplying loose copies has been discontinued, the Index having been placed in the centre of the journal, whence it can easily be detached, and placed either at the beginning or at the end of the volume.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1896 are now ready. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.* (Local bookbinders will charge about 1*s.* for binding the numbers in these cases.)

To be obtained on application to the Manager, accompanied by remittance.

AN "INCANTMENT."

To the Editors of THE LANCET.

SIRS,—To the various interesting remedies for diseases favoured by the medical fraternity in former times which have been published in the correspondence columns of THE LANCET the following, extracted from Herr Heim's recently published "Incantamenta Magica Græca Latina," may be worthy of a place: "Ad febres. Morionis manum unam collige cum oratione dominica, tere cum aquâ frigidâ, bibe, probatum est." I am, Sirs, yours faithfully,

Jan. 4th, 1897. JOSEPH OFFORD.

AN EXTEMPORISED ARM BATH.

MR. RICHARD SLOCOCK, of Goldwell, Newbury, Berkshire, writes to us that a galvanised iron vessel called a "seed lip," used for holding seed and carried by a man who is sowing, makes an excellent arm bath for use in cases of poisoned hands or arms. Its shape is adapted to that of the body; it is not too deep nor does the edge hurt the arm. It is kept in stock by country ironmongers.

"THE UNQUALIFIED ASSISTANT."

To the Editors of THE LANCET.

SIRS,—I had hoped to see ere this an answer to "Student's" plea for the unqualified assistant, which appeared in THE LANCET of Dec. 16th, 1896. But as none has appeared may I venture to write a few words on the matter? I presume that the great fundamental moral objection to the employment of unqualified assistants is the undoubted, and often proven, fact that these assistants hold themselves forth, and are held forth by their employers, as being duly qualified men. The fact that they have failed in their examinations or that they have not yet received the minimum of instruction which would entitle them to sit for examination is most carefully withheld. They are therefore impostors, only less guilty than those who make money by employing them. "Student" protests against the unqualified man being prevented from earning his living by practising the profession which he hopes to enter, but to which he does not belong, and asks, "In what other profession in the world does such a state of things exist?" I venture to reply, "In every other profession." If a man took a curacy without having been ordained what does "Student" think would happen to him? If a law student acted as a solicitor without really being one he would certainly find himself in prison before very long, and "imagination boggles at" the idea of the fate that would befall the man who, not being a barrister, should assume wig and gown and "address the Court" in any but his own cause. Lastly, if a man presume to practise the "profession of arms" without due authority from some acknowledged potentate, he will find himself hanged as a murderer or shot as a filibuster. In medicine, and in medicine alone, Sirs, has the unfair competition of the unqualified man ever been tolerated. The law student may earn an honest pound or two by doing law clerk's work, the divinity student by, say, tutorial work; but neither may trespass one inch upon the field of the members of the respective professions. And so it should be with the medical student. Nobody objects to his acting as dispenser or to his keeping the books of some busy practitioner, but it is an outrage to the profession and a gross fraud upon the public that he should be allowed to visit and treat the sick. "Student," in my opinion, misrepresents the gentlemen who swell the ranks of the unqualified assistants. Here and there may, perhaps, be found one whose position is his misfortune, not his fault. But the very great majority of them are not worthy young fellows who, after a successful but all too brief career at a hospital, find themselves stranded through paternal indiscretions or disasters. They are mostly good-for-nothing idlers who, having dawdled away some eight or ten years pleasantly enough at a medical school, hear at last the just but terrible paternal fiat, "Earn your own living!"

I am, Sirs, yours faithfully,

Jan. 3rd, 1897. A PRACTITIONER.

M.B.—We do not consider the advertisement seemly, but hope that the medical men themselves are not responsible for it. The mistake in the description of the first gentleman named would seem to show that he had no knowledge of the matter.

ADVERTISEMENT.

WE understand from a correspondent that the following card has been publicly circulated:—

NORTH KENSINGTON DISPENSARY,
152, WALMER ROAD,
NOTTING HILL, W.

(Close to where the four roads meet: Walmer Road, Lancaster Road, Clarendon Road, and Silchester Road).

EXPERIENCED DOCTOR
At any Hour, Day or Night.

MINIMUM CHARGES.
(For Cash Down).

Midwifery...	10/6
Medicine	6*d.*
Medicine (3 times in a week)...	1/-
Visit	1/-
Visits and Medicine for a week	2/6

"Experienced Doctor" must know that it is unprofessional to press his claim upon the public in any way so as to attempt to undersell his fellow practitioners or detach their patients from them.

A WARNING TO MEDICAL MEN.

To the Editors of THE LANCET.

SIRS,—Will you kindly allow me through your columns to warn the medical profession against an individual who is presenting cards bearing my name, and obtaining loans of a few shillings to, as he states, pay his fare home to Croydon, he having either lost his ticket or run short of money and he does not want to return to the office? He promises to repay the money next day but, of course, does not do so. I would point out that this person in no way represents me and is an impostor. Thanking you in anticipation,

I am, Sirs, yours truly,

WALTER MAYS,

Old Kent-road, Jan 2nd, 1897. Cork Merchant and Manufacturer.

"DISINFECTION OF BOOKS AFTER SCARLET FEVER."

To the Editors of THE LANCET.

SIRS,—My attention has been directed to THE LANCET of Dec. 19th, wherein "A. B. S." asks for information on disinfecting books used during an attack of scarlet fever. During the epidemic of small-pox in Sheffield in 1887 the Corporation Free Library Committee found that books were often taken from the public libraries for the use of persons suffering from small-pox. As a result the issue of books was stopped for a time to prevent, if possible, the spread of the disease through the circulation of books from the libraries. A sub-committee was formed, of which I was a member, to consider the subject. The committee decided, after experiments, to have constructed a sheet iron oven about two and a half or three feet square, with an inner and outer chamber and a space of two inches between them. Within the two inch space and on the bottom of the oven a circle of Bunsen gas burners was inserted, which heated the air in the space surrounding and interior of the oven to from 180° to 220° F. On the bottom of the inner chamber was placed a small vessel containing No. 4 Calvert's liquid carbolic acid; the heat dissipated the acid into fumes, which penetrated the leaves and the whole texture of the books previously placed into the oven in an open state, resting upon their own front binding in grooved recesses. The oven had regulating dampers, a thermometer to register the heat, with flues to pass off both heat and fumes as generated into an adjoining chimney. Neither the leaves nor the binding were injured, and the result was most satisfactory and believed to be effectual. Since that time all books belonging to the free libraries of the city found in certified infected houses by the medical officer of health are notified to the city librarian. All are disinfected by passing through the carbolic oven before they are again issued into circulation. The oven and its appliances can be seen at the Free Central Library, Sheffield.

I am, Sirs, yours faithfully,

Dec. 30th, 1896. A LATE MEMBER OF THE SUB-COMMITTEE.

Inquirer.—If our correspondent can prove his case he ought to have no difficulty in recovering his fee against one or other of the parties in the county-court. We are not so clear as to the nurse, unless our correspondent is liable to pay, and has paid, her.

Ignoramus will find the exact information he requires in the Students' Number of THE LANCET, published on Sept 5th, 1896.

" . . . A SIMPLE CHILD
THAT LIGHTLY DRAWS ITS BREATH."

UNLESS, as we suspect is the case, the "infant phenomenon" hereinafter described be the offspring of the American reporter's brain, the "phenomenon's" parents deserve the sincerest pity. The following details are reproduced by our contemporary the *Globe* from the *New York Journal*:—

"A BOY SURGEON.

"Though less than five years old little Will Gwin knows the name of every bone in the human body, knows the location of the various organs, and talks learnedly of the most intricate surgical operations. He knows more anatomy than most medical students. And not only this, but he can wield the scalpel as deftly as many surgeons. The boy's father is a physician and the little one almost always accompanies him on surgical cases. He has frequently seen the human body dissected, and has watched the gleaming knives at their gruesome work with intense interest. Frequently he has been with his father when called to attend persons mangled by the electric railways in New Orleans and has exhibited a boy's keen interest at so novel an experience. Once, when the injured man had been placed under the influence of chloroform, the boy looked up at his father and said, 'Papa, does God make chloroform so that people can be fixed not to feel the knife when the doctor uses it?' Again, the little fellow placed his hand in one of the gaping wounds and told the doctors his idea of the injury that had been inflicted.

* * * * * * *

Dr. Howell B. Gwin, the boy's father, explains how it happens that the child comes to know so much about anatomy. Dr. Gwin says: 'In romping with my boy on the bed I used to amuse him by calling out some difficult name of a bone in the body and taunting him with not being able to repeat it. He very readily caught the words and, strangely enough, retained them without any effort. He then began to associate the name of the bone with its location, and it was not long before he knew a great deal of anatomy.'

* * * * * *

Not so very long ago this youngest of all surgeons paid a visit to New York and thoroughly inspected the larger hospitals there, paying particular attention to the cases of interest in the surgical wards. He also took a look at the hospitals of Philadelphia, Washington, Cincinnati, St. Louis, and of other cities."

After this we can but express our sympathy with "little Will's" parents and commend him to the notice of Dr. Ibsen as a specimen of the younger generation.

Fair Play.—The demand for an addition to the salary would be reasonable, but we are not aware that any legal decision can be quoted in its support.

THE PREVENTION OF THREAD WORMS: A QUERY.

To the Editors of THE LANCET.

SIRS,—I should feel much obliged if any of your readers would kindly give me a permanent remedy for thread worms in a little girl seven years of age who has suffered from them for two years. Ordinary remedies are of only temporary relief as they recur again and again.

I am, Sirs, yours truly,

Jan. 4th, 1897. PERSEVERE.

Subscriber.—Alabone, Edwin William, registered as Mem. R. Coll. Surg. Eng. 1870. His name and qualification were erased from the Medical Register on Nov. 16th, 1886, by order of the General Medical Council in consequence of his name having been removed from the list of Members of the Royal College of Surgeons of England. There is no one on the current Medical Register bearing the name.

NATIVE SURGERY IN NEW BRITAIN.

THE Rev. John A. Crump, Wesleyan missionary in New Britain, has described in the *Auckland Weekly News* some extraordinary surgical operations performed among the natives of that Polynesian island and asserts that they are followed by very satisfactory results. Fractures of the tibia, both simple and compound, are treated by cutting away the soft parts, and removing any splinters of bone. Then a piece of the green taqete stalk (Cordyline terminalis) about four inches long, and half an inch in diameter is forced into the central cavity of the upper part of the broken bone for two inches of its length. The limb is then violently extended, the lower part of the bone fitted on to the projecting taqete stalk, and the two fractured surfaces thus brought together. A piece of the midrib of the cocoanut leaf is then securely tied over the limb, and in a very short time the patient is about again. Mr. Crump was not successful in his endeavours to ascertain what became of the piece of stick inside the bone. After depressed fracture of the skull the scalp is incised with a piece of shell or obsidian and the fragments of bone are picked out, perhaps leaving the brain freely exposed; the wound is then closed and dressed with bruised leaves and strips of banana stalk, and in a month recovery is complete. Mr. Crump obtained possession of several skulls which had been treated in this manner, all of them showing evidence of the commencement of new growth.

R. T.—We do not know anything of any correction of our statement. At all events what we said was right, and any contradiction of it is entirely wrong. The name is *not* upon the current official roll of the profession.

MASSAGE OF THE EYEBALL BY A QUACK.

A MUNICH quack who was brought up as a tailor was recently prosecuted for having caused damage to a patient with detachment of the retina by his treatment, which consisted in practising massage on the eyeball. In defence two other quacks who styled themselves *Naturheilärzte*, "natural cure doctors," were called, and these gentry affirmed that massage was by no means contra-indicated in retinal detachments. The court, however, preferred to accept the opinion of two well-known ophthalmic surgeons that the tendency to loss of sight had been increased by the manipulations of the prisoner, who was accordingly sentenced to a month's imprisonment.

Baynham.—The matter will receive our immediate attention.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received:—*Scottish Highlander, West Lothian Courier, Woking Mail, Newcastle Chronicle, East Anglian Daily Times, Glasgow Evening News, Bradford Observer, Indian Engineer, Times of India, Lowestoft Standard, Pioneer Mail, Banbury Guardian, Scotsman, Liverpool Daily Post, Manchester Courier, Dewsbury Reporter, Speaker, Carlisle Journal, Preston Herald, Builder, Rochester Journal, Cheltenham Herald, Architect, Somerset County Herald, Worcestershire Chronicle, Leeds Mercury, Sussex Daily News, Leicester Post, Essex County Standard, Liverpool Courier, Yorkshire Post, Hampshire Telegraph, Wolverhampton Chronicle, Surrey Times, Darlington Times, Bristol Mercury, Birmingham Post, Western Morning News, Durham Chronicle, Barnsley Chronicle, Cornish Telegraph, Devizes Gazette, Stratford Express, Sanitary Record, Weekly Free Press and Aberdeen Herald, The Morning, City Press, Reading Mercury, Hertfordshire Mercury, The Sun, Local Government Chronicle, Mining Journal, Local Government Journal, Surrey Advertiser, Heckmondwike Reporter, Yorkshire Weekly Post, Daily Chronicle, Exmouth Journal, The People, Buckingham Express, Galignani Messenger, Kentish Mercury, West Middlesex Herald, Prescot Reporter, Keighley Herald, Jackson's Oxford Journal, &c, &c.*

Communications, Letters, &c., have been received from—

A.—Mr. Dinshah Ardeshir, Baroda, Western India; Messrs. Armour and Co., Lond.; Miss Edith Auld, Lond.

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